

## VITA

### I. PERSONAL DATA

Name: James R. Russell  
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Colo, IA 50056  
  
Date: January 2, 2014

### II. RANK

Professor

### III. EDUCATION

Degree	Institution	Date
Ph.D.	University of Wisconsin	1979
M.S.	University of Wisconsin	1975
B.S.	University of Wisconsin	1972

### IV. PROFESSIONAL EXPERIENCE

Year(s)	Activity
1972-79	Research Assistant, University of Wisconsin
1979-85	Assistant Professor (75% research time; emphasis, forage research), Iowa State University
1980	Assistant Professor (25% teaching time; taught, An Sci 519, An Sci 319), Iowa State University
1981	Assistant Professor (25% teaching time; taught, An Sci 519), Iowa State University
1982	Assistant Professor (25% teaching time; taught, An Sci 218, An Sci 518), Iowa State University
1983	Assistant Professor (25% teaching time; taught, An Sci 610; An Sci 218; An Sci 518), Iowa State University
1984	Assistant Professor (25% teaching time; taught, An Sci 218; An Sci 518; An Sci 519), Iowa State University
1985-93	Associate Professor (75% research time; emphasis, forage research), Iowa State University
1985-86	Associate Professor (25% teaching time, taught An Sci 218; An Sci 518; An Sci 519), Iowa State University
1987-90	Associate Professor (25% teaching time; taught An Sci 218, An Sci 519), Iowa State University
1988- 04	Leader, Animal Management Issue Team, Leopold Center for Sustainable Agriculture, Iowa State University

- 1991-93 Associate Professor (25% teaching time; taught, An Sci 218 (On-campus), An Sci 218 (Off-campus video), An Sci 318, An Sci 519), Iowa State University
- 1993-96 Professor (75% research time; emphasis, forage research; 25% teaching time; taught, An Sci 318, An Sci 519), Iowa State University
- 1996- 97 Professor (75% research time; emphasis, forage research; 25% teaching time; taught An Sci 318, An Sci 519, An Sci 520X, An Sci 580X), Iowa State University
- 1998-0 Professor (75% research time; emphasis, forage research; 25% teaching time; taught An Sci 519, An Sci 520, An Sci 580 and advised 10 undergraduates), Iowa State University
- 2000-02 Professor (75% research time; emphasis, forage and environmental research; 25% teaching time; taught An Sci 211, An Sci 515, An Sci 519, An Sci 603, and advised 20 undergraduates), Iowa State University
- 2003-04 Professor (75% research time; emphasis, forage and environmental research; 25% teaching times; taught An Sci 519 and Sus Ag 515 and advised 15 to 30 undergraduates/semester), Iowa State University
- 2005-06 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 321x, An Sci 519, and Sus Ag 515 and advised 15 undergraduates/semester), Iowa State University
- 2006-07 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 321, An Sci 321L, An Sci 519, and FSHN 553 and advised 10 undergraduates/semester), Iowa State University
- 2007-08 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 321, An Sci 321L, and An Sci 515 and advised 8 undergraduates/semester), Iowa State University
- 2008 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 321, An Sci 321L, An Sci 419 and An Sci 519 and advised 5 undergraduates/semester), Iowa State University
- 2009 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 419, An Sci 543X)
- 2010 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 520)
- 2011 Professor (75% research time; forage, cow-calf nutrition, and environmental research; 25% teaching time; taught An Sci 543XA, An Sci 603, Sus Ag 515)
- 2012 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teach time; taught An S 320, An S 520)
- 2013 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teach time; taught An S 320, Sus Ag 515)
- 2014 Professor (75% research time, forage, cow-calf nutrition, and environmental research; 25% teach time; taught An S 319, An S 520)

## V. ISU PERSONNEL RECORD

<b>Rank</b>	<b>Appointment Date</b>	<b>Base</b>	<b>Assignment</b>
Assistant Professor	1979	A	75% Research; 25% Teaching
Associate Professor	1985	A	75% Research; 25% Teaching
Graduate Faculty	1992		
Professor	1993	A	75% Research; 25% Teaching

## PROFESSIONAL ACTIVITIES

### Current Membership

American Society of Animal Science

American Dairy Science Association

American Forage and Grassland Council

Iowa Forage and Grassland Council

Society for Range Management

NCERA-87 Cow-Calf Feeding and Management Committee

NC1181 Enhancing Resiliency of Beef Production under Shifting Forage Resources Committee

NC1182 Management and Environmental Factors Affecting Nitrogen Cycling and Use Efficiency in Forage-based Livestock Production Systems

### Offices held

Editorial Board, 1982-84

Editorial Board, 1994-97

Ruminant Program

Committee-Midwestern

Sectional Meeting, 1997-99 (Chair, 1999)

AFIA Award Committee, 1997

Extension Symposium Committee-

Midwestern Sectional Meeting, 2007

Pioneer Hi-bred International, Inc.

Forage Award, 2004-2006 (Chair, 2006)

Finance Committee, 1984-87

Planning Committee for 1993

AFGC Meeting, 1992-93

Secretary, 1982

Vice-chair, 1984

Chair, 1984

Secretary, 1996

Vice-chair, 1997

Chair and coordinator, 1998

Member, Ad hoc committee

to develop Cow-calf 'Management

Effects on Water Quality' Symposium at

2007 Midwest Section Meeting of

ASAS, 2006-07

## **AWARDS, HONORS AND RECOGNITION**

Awarded membership to Gamma Sigma Delta Honor Society of Agriculture, 1978

Awarded membership to Sigma Xi Research Honor Society, 1989

Awarded OECD Research Fellowship to study at the Institut fur Bodenbiologie, Bundesforschung fur Landwirtschaft, Braunschweig, FRG, 1986.

Awarded Certificate of Appreciation for the Efforts Directed towards the Advancement of Students with Disabilities, 1991.

Awarded Kellogg Fellowship to the 1992 Leadership Development Program at the National Center for Food and Agricultural Policy, 1992.

Awarded OECD Research Fellowship to study at AgResearch, New Zealand, Palmerston North, New Zealand, 1997.

Received “Forage Industry Merit Award” for the Iowa Forage and Grassland Council, 1998.

Received “Merit Award” from the American Forage and Grassland Council, 2000.

Received ‘Pioneer Hi-Bred International, Inc. Forage Award’ from the American Dairy Science Association, 2003.

Received ‘The Regents Award for Faculty Excellence’ from Iowa State University, 2008.

Received ‘Lee R. Kolmer Award for Applied Research’ from College of Agriculture and Life Science, Iowa State University, 2011

## VIII. RESPONSIBILITIES

### A. Teaching and Academic Advising. (Last 3 years)

Classes taught.

<b>Catalog Number</b>	<b>Title</b>	<b>Credit hours</b>	<b>Students taught / Sem.</b>
An Sci 520	Ruminant Digestive Physiology and Metabolism	3	6 -15
An Sci 603	Graduate Animal Nutrition Seminar	R	18 – 25
Sus Ag 515	Integrated Crop and Livestock Production Systems	3	15
An Sci 320	Animal Feeds and Feeding	3	30-70
An Sci 319	Animal Nutrition	3	140

Students advised (Total).

Graduate	5
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### B. Research Creativity

The overall objective of my research program has been to improve the economic efficiency and environmental soundness of beef production systems by improving the utilization of forages. The central focus of my research efforts in earlier years was evaluating the effects of storage methods on the nutritional value of forages for beef cattle. We continue to conduct similar research.

During the decade of the 1990's, the major objective of my research program was the integration of forage resources to develop and evaluate year-round grazing systems to improve the profitability of beef production. These systems utilized rotational stocking of grass-legume pastures to optimize productivity of summer pastures and winter grazing of crop residues and stockpiled perennial forages to minimize costs associated with feeding of stored feeds. In these experiments, yield, botanical composition and chemical composition of the plants and the feed selection, feed intake and productive performance of the cattle were evaluated in integrated winter and summer grazing systems. This effort was enhanced by my position as the Leader of the Animal Management Issue Team of the Leopold Center for Sustainable Agriculture. Furthermore, because of the similarities of interests in promoting year-round grazing systems, I participated in numerous collaborations in grazing experiments first with a group of researchers from the University of Missouri and then with researchers from the University of Nebraska and Kansas State University in the regional NC-225 project entitled "Improved Grazing Systems for Beef Cattle Production."

As a result of the input of producers and extension and USDA-NRCS personnel that were members of the Animal Management Issue Team in the Leopold Center, the emphasis of my research program has also become more directed towards the effects of grazing management on environmental quality. Working with a team of researchers from ISU extension, ISU Outlying Research and Demonstration Farms, USDA-National Soil Tilth Laboratory, and USDA-Natural Resource Conservation Service, a project was conducted to evaluate the effects of corn crop residue grazing of soil physical properties and subsequent crop production. In 2000-05, I worked with a team of researchers from the ISU Departments of Animal Science, Forestry, and Agricultural and Biosystems Engineering and the USDA-National Soil Tilth Laboratory with cooperation from the Iowa Beef Cattlemen's Association to conduct a project evaluating the effects of grazing management practices on sediment and phosphorus losses from pasture run-off was initiated in 2001 through 2004. In addition to techniques more commonly used in grazing experiments, we conducted rainfall simulation studies to measure water run-off and sediment and phosphorus loss. Because of the relationship of grazing management to water quality in pasture streams, I led a team of researchers from the Department of Animal Science and the USDA-National Soil Tilth Laboratory to develop a proposal to the Iowa Department of Natural Resources' Section 319 program to evaluate the use of grazing management to limit sediment and phosphorus pollution of pasture streams from stream bank erosion and manure deposition at the Iowa State University Rhodes Research Farm that was initiated in 2005. In this project, we are utilizing pins and LIDAR to measure erosion and GPS to measure the spatial/temporal distribution of cattle. To extend this project at the Rhodes Research Farm and expand the work to farms in the Rathbun Lake watershed in southern Iowa, my colleagues and I submitted a proposal entitled "PASTURE MANAGEMENT EFFECTS ON NON-POINT SOURCE POLLUTION OF MIDWESTERN WATERSHEDS" to the USDA National Integrated Water Quality Program 406. This proposal will be funded from 2006 through 2009. Another proposal entitled "GRAZING MANAGEMENT EFFECTS ON PATHOGEN LOADING OF STREAMS IN MIDWESTERN PASTURES" is funded from the USDA NRI from 2007 through 2010. Further funding was received from the Leopold Center for Sustainable Agriculture to continue this work until 2011.

In 2010, interest in mob-grazing amongst producers prompted me to establish a research program to investigate the management and strategic use of mob-grazing to enhance animal productivity, legume establishment, carbon sequestration, water quality, and wildlife habitat. With decreasing availability of grazing lands in the Midwest, this research has become the basis of alliances between beef cattle producers and other recreational land owners wishing to improve wildlife habitat. As an extension of this research on the relationship of grazing management and ecological services, a project investigating the effects of grazing management on the net global warming potential of pastures was initiated.

**Graduate students completing degrees:**

<b>Student</b>	<b>Thesis title</b>	<b>Year graduated</b>	<b>Degree</b>
Bisinger, J.J.	Grazing management effects on environmental Quality of riparian and upland grassland ecosystems	2014	M.S.
Dunn, M. W.	Stocking system effects on cattle performance, forage, and soil properties of cool-season pastures	2013	M.S.
Bear, D. A.	Pasture management effects on nonpoint source pollution of Midwestern watersheds	2011	M.S.
Schwartz, K. A.	Assessment of the risks of nonpoint source pollution of pasture streams related to grazing management	2010	M.S.
Lasley, Peter W.	Winter grazing systems for fall-calving cows for grass-based beef production systems	2009	M.S.
Haan, Mathew M.	Impacts of forage management on phosphorus cycling and sediment and phosphorus transport in surface run-off	2005	M.S.
Driskill, R. E. M.S.	Effects of stocking rate and corn gluten feed supplementation on bred second-calf heifers grazing stockpiled tall fescue-red clover pastures	2005	
Justin T. Clark	Evaluating efficacy and limitations of winter grazing systems for beef cattle on animal production and soil properties	2003	M.S.
Nicole Janovick	Evaluation of year-round grazing systems for fall- and spring-calving beef cows	2002	M.S.
Mary L Hermann	Evaluation of hay-type and grazing tolerant alfalfa cultivars in season-long and complementary rotational stocking systems for beef cows	2000	M.S.
Matthew J. Hersom	Evaluation of year-round forage management systems for beef cow-calf production	1999	M.S.
M. Akif Karsli	Ruminal microbial protein synthesis in sheep fed forages of varying nutritive value	1998	Ph.D.
Jodi Western	Cow-calf production from alfalfa-grass or smooth brome pastures rotationally stocked at three	1997	M.S.

	rates.		
Andrew C. Hitz	The efficacy of stockpiled perennial forages for winter grazing by beef cattle	1996	M.S.
M. Akif Karsli	Berseem clover as a protein supplement for corn crop residues	1996	M.S.
Tito E. Diaz-Munoz	Ruminal microbial colonization and digestion kinetics of corn stover as affected by chemical treatment and nitrogen supplementation	1993	Ph.D.
Yan-Chin Hsiao	Storage treatment effects on the value of large round bales of alfalfa-smooth brome grass hay as a supplement for corn stover	1988	M.S.
Michael R. Brasche	Influence of storage methods on the utilization of large round hay bales by beef cows	1987	M.S.
Nancy A. Irlbeck	Genetic, agronomic and ensiling effects on forage quality of corn whole plant and stover	1986	M.S.
A. Moses Adamu	Supplemental protein sources for growing cattle fed corn stover silage	1985	Ph.D.
Augusto Rojas-Bourrillon	Effect of rolled corn silage on digestion of nutrients and feedlot performance of growing steers	1985	M.S.
Kathy K. Rennick	The effects of monensin supplementation upon lactating beef cows and growing beef heifers fed crop residues	1982	M.S.
Emma Mallarino	Effect of harvesting method and length of storage on the nutritional value of corn stover	1981	M.S.

### Master of Agriculture Students

<u>Student</u>	<u>Creative Component</u>	<u>Year graduated</u>	<u>Degree</u>
Katrina Pille Ag.	Seasonal effects on forage and available soil phosphorus content in cool-season grass pastures in southeastern Iowa	2012	M. of
Angela Richardson	A Survey of Current Grazing Management Practices of Iowa Cow-calf Producers	2011	M. of Ag.



## Extension and/or Professional Practice

Although I do not have an extension appointment, I have supported extension activities related to increased forage utilization by preparing 147 extension leaflets and participating in 159 extension or field day/meetings over the last 34 years. I obtained funding for and actively participated in the preparation of a 5 part series of videotapes on improved grazing practices which was distributed to each county extension office in Iowa and sold over 700 copies. As a supplement to this videotape, I participated in the preparation of a book entitled “A Grazing Guide for Livestock Producers” which was published in 1998 and has sold over 1000 copies. Premier Fencing of Washington, Iowa added this book to their catalog, calling it “The best modern guide we’ve seen by far. Highly recommended for all Midwest cattle and sheep producers.” In 1998 through 2003, I worked with a team of extension personnel on the development of a forage budgeting spreadsheet for planning year-round grazing systems to improve the profitability of beef cow-calf production. In 1999 to 2001, we demonstrated the effectiveness of this technology on a producer’s farm near Guthrie Center, Iowa. In 1997 through 2000, I coordinated the An Sci 580 “Sustainable Agriculture Seminar” course transmitted over the Iowa Cable Network to both students and the general public. In 2002, I served as the representative for the NC-225 “Improved Grazing Systems for Beef Cattle” Regional Project in a team with members from the Northern Integrated Resource Management Group and the National Cattlemens’ Beef Association in the development of a conference series entitled “Integrating Cattle and Forage Resources” that was held in four sites across the Midwest. In addition to leading the development of the itinerary for this conference, I also was in charge of announcing and editing abstracts and arranging for the display of research posters and in charge of authoring a leaflet entitled “Making Extended Grazing Work in Iowa” and editing similar leaflet from the other participating states which were distributed at these conferences. Since 2004, I have lead a group of research and extension personnel in the Department of Animal Science and the USDA National Soil Tilth Laboratory conducting the ‘Use of Grazing Management to Limit Sediment and Phosphorus Pollution of Pasture Streams from Streambank Erosion and Manure Deposition’ project which has annual field days to demonstrate the construction and maintenance of stream crossings and the effects of grazing management on the properties of the stream bank and pasture. As part of the project entitled ‘Pasture Management Effects on Non-point Source Pollution of Midwestern Watersheds’ funded by the USDA National Integrated Water Quality Program 406, annual field days at the Rhodes Research Farm and at farms in the Rathbun Lake watershed continued through 2009. Also, as part of this project, I prepared one and edited two publications entitled ‘Managing Pasture Water with subtitles of ‘Riparian Buffers, Stabilized Stream and Pond Access Sites, and Off-stream Water and Nutritional Supplementation’ with supplemental on-line technical publications.

In addition, I have regularly participated in in-service training of area livestock extension specialists, given radio and television interviews, and have given interviews to the Angus Journal, Feedlot Magazine, Successful Farming Magazine, Wallace’s Farmer Magazine, Iowa Farmer Today, Hay and Forage Grower Magazine, Beef Magazine, Iowa Cattlemens’ Magazine, Farm Bureau Spokesman, Drover’s Journal, Country Living Magazine, the Des Moines Register and the Ottumwa Courier in the preparation of articles. Furthermore, I served as the editor of the Annual Report for the McNay Memorial Research Farm from 1990 to 1999 and as the editor of the Environment section of the ISU Animal Industry Report

#### D. International Activities (last 3 years)

##### 2014

Presented “Grazing Management to Enhance Water Quality and Other Ecological Services from Grasslands’ at the joint meeting of the Argentina Association of Animal Production and the American Society of Animal Science, Buenos Aires, ARG, October 22, 2014.

Hosted Administrators from the University of Kiev, November, 2014.

##### 2013

Participated in ‘Potential of Sisal as a Ruminant Feedstuff’ Workshop at Outreach in Des Moines, IA, July 15, 2013.

Presented “Role of Cattle in Sustainable Agriculture Systems in Tanzania’ at ‘Africa’s Big Five vs the Real Big Five: Crocodiles in the Soup’ Breakout Session at the World Hunger Summit, Des Moines, IA, October 16, 2013.

##### 2011

Hosted Mike and Sharon Barton, Taupo, New Zealand who were speakers in the Sustainable Agriculture Colloquium, 1/14/11

Presented ‘Feeding CaO-treated stover as a partial replacement for corn in feedlot diets’ to tour group of farmers from Argentina, 8/24/11

Reviewed Research Proposal for Israel-US BARD Program, 12/8/11

#### E. Service. Last 3 years.

##### Departmental committees:

Member of the Admission Committee for the Graduate Program in Animal Nutrition, 2011-

Member of the Search Committee for an Assistant/Associate Professor of Comparative Animal Nutrition, 2011-12

Member of the PEC committee to review the application for collaborator status for Dr. George Fahey, 2012

Chaired the search committee for a Superintendent of the ISU Sheep Teaching Farm, 2012

Member of the PEC committee to review pre-tenure package of Dr. Stephanie Hansen, 2012 -2014

Member of the Kildee Animal Facility Committee, 2012-

Member of the Electronic Materials, Facilities, and Equipment Committee, 2012-

Ad hoc committee for post-tenure review of the credentials of Dr. Howard Tyler, 2012

Ad hoc committee for post-tenure review of the credentials of Dr. Max Rothschild, 2013

Ad hoc committee for ‘Future of Beef Production’ publication, 2013

Mentor for Dr. Cheryl Morris, 2013-

Peer-reviewed teaching of Nick Gabler in the spring semester, 2013

Ad hoc committee for post-tenure review of the credentials of Dr. Dorian Garrick, 2014

##### Program committees:

Member of Curriculum Committee of the Interdepartmental Graduate program in Nutrition, 2009-

Member of Admission Committee of the Graduate Program in Environmental Science,  
2013-

College committees:

Member of the Search Committee for the Director of the Leopold Center for Sustainable  
Agriculture, 2011

Professional/Scientific Societies:

Listed in the AMI Meat and Poultry Expert Guide for Journalists, 2013-

## PUBLICATIONS

### A. Refereed journal articles.

- Bisinger, J.J., J.R. Russell, and D.G. Morrical. 2015. Beef cattle stock density and duration effects on grassland plant communities and vegetation structure. *Agron. J.* (In review)
- Bisinger, J.J., J.R. Russell, D.G. Morrical, C. Cambardella, and J.L. Kovar. 2015. Beef cattle stock density and duration effects on soil quality characteristics. *Agron. J.* (In review)
- Kovar, J.L., H. Hongthanat, M.L. Thompson, T.M. Isenhardt, and J.R. Russell. 2015. Phosphorus source-sink relationships of stream sediments in the Rathbun Lake watershed in southern, Iowa, USA. *J. Soil Water Conserv.* (Revision in review)
- Summer, P.G., J.A. Rathmacher, and J.R. Russell. 2015. The effect of diet cation-anion difference upon plasma 3-methylhistidine concentration and intracellular fluid volume in growing steers. *J. Anim. Sci.* (Revision in review)
- Russell, J.R. and J.J. Bisinger. 2015. FORAGES AND PASTURES SYMPOSIUM: Improving soil health and productivity on marginal lands using managed grazing of livestock (Accepted for publication)
- Brown, S.B., C.D. Ikenberry, M.L. Soupir, J. Bisinger, and J.R. Russell. 2014. Predicting time cattle spend in streams to quantify direct deposition of manure. *Trans. ASABE* 30(2):187-195.
- Bisinger, J.J., J.R. Russell, D.G. Morrical, and T.M. Isenhardt. 2014. Pasture size effects on the ability of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing beef cows. *J. Anim. Sci.* 92:3650-3658
- Tufekcioglu, M., T.M. Isenhardt, R.C. Schultz, D.A. Bear, J.L. Kovar, and J.R. Russell. 2012. Stream bank erosion as a source of sediment and phosphorus in grazed pastures in the Rathbun Lake watershed in southern Iowa, United States. *J. Soil Water Conserv.* 67:545-555
- Bear, D.A., J.R. Russell, and D.G. Morrical. 2011. Pasture physical characteristics and shade distribution effects of temporal/spatial distribution of cows in Midwestern pastures. *Rangel. Ecol. Manage.* 65:401-408
- Bear, D.A., J.R. Russell, M. Tufekcioglu, T.M. Isenhardt, D.G. Morrical, and J.L. Kovar. 2012. Stocking rate and riparian vegetation effects on physical characteristics of riparian zones of Midwestern pastures. *Rangel. Ecol. Manage.* 65:119-128
- Schwarte, K.A., J.R. Russell, and D.G. Morrical. 2011. Effects of pasture management and off-stream water on temporal/spatial distribution of cattle and stream bank characteristics in cool-season grass pastures. *J. Anim. Sci.* 89:3236-3247.

- Schwarte, K.A., J.R. Russell, J.L. Kovar, D.G. Morrical, S.M. Ensley, K.J. Yoon, N.A. Cornick, and Y.-I. Cho. 2011. Grazing management effects on sediment, phosphorus, and pathogen loading of streams in cool-season grass pastures. *J. Environ. Qual.* 40:1303-1313.
- Nellesen, S.L., J.L. Kovar, M.M. Haan, and J.R. Russell. 2011. Grazing management effects on stream bank erosion and phosphorus delivery to a pasture stream. *Can. J. Soil Sci.* 91:385-395.
- Davis, J.D., M.J. Darr, H. Xin, J.D. Harmon, and J.R. Russell. 2011. Development of a GPS herd activity and well-being kit (GPS HAWK) to monitor cattle behavior and the effect of sample interval on travel distance. *Appl. Eng. Agric.* 27(1):143-150.
- Webber D.F., S.K. Mickelson, S.I. Ahmed, J.R. Russell, W.J. Powers, R.C. Schultz, and J.L. Kovar. 2010. Livestock grazing and vegetative filter strip buffer effects on runoff sediment, nitrate, and phosphorus losses. *J. Soil Water Conserv.* 65:34-41.
- Haan, M.M., J.R. Russell, J.D. Davis, and D.G. Morrical. 2010. Grazing management and microclimate effects on cattle distribution relative to a cool season pasture stream. *Range. Ecol. and Man.* 63:572-580.
- Roberts, S., H. Xin, B. Kerr, J. Russell, and K. Bregendahl. 2007. Effects of dietary fiber and low crude protein on nitrogen balance and egg production in laying hens. *Poultry Science* 86:1716-1725
- Roberts, S., H. Xin, B. Kerr, J. Russell, and K. Bregendahl. 2007. Effects of dietary crude fiber and low crude protein on ammonia emission from laying-hen manure. *Poultry Sci.* 86:1625-1632
- Driskill, R., J.R. Russell, D.R. Strohbehn, D.G. Morrical, S.K. Barnhart, and J.D. Lawrence. 2007. Effect of stocking rate and corn gluten feed supplementation on the performance of young beef cows grazing winter stockpiled tall fescue-red clover pasture. *J. Anim. Sci.* 85:1577-1586.
- Haan, M.M., J.R. Russell, W.J. Powers, J.L. Kovar, and J.L. Benning. 2007. Effects of forage management on pasture productivity and phosphorus content. *Range. Ecol. and Man.* 60:311-318.
- Haan, M.M., J.R. Russell, W.J. Powers, J.L. Kovar, and J.L. Benning. 2006. Grazing management effects on sediment and phosphorus in surface run-off. *Range. Ecol. and Man.* 59:607-615.
- Janovick, N.A., J.R. Russell, D.R. Strohbehn, and D.G. Morrical. 2005. Grazing and feedlot performance of yearling stocker cattle integrated with spring- and fall-calving beef cows in a year-round grazing system. *J. Anim. Sci.* 83:2696-2704.

- Janovick, N.A., J.R. Russell, D.R. Strohbehn, and D.G. Morrical. 2004. Productivity and hay requirements of beef cattle in a Midwestern year-round grazing system. *J. Anim. Sci.* 82:2503-2515.
- Clark, J.T., J.R. Russell, D.L. Karlen, W.D. Busby, and B.C. Peterson. 2004. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. *Agron. J.* 96:1364-1371.
- Blummel, M., A. Karsli, and J.R. Russell. 2003. Influence of diet on growth yields of rumen micro-organisms *in vitro* and *in vivo*: influence on growth yield of variable carbon fluxes to fermentation products. *Brit. J. Nutr.* 90:625-634.
- Karsli, M.A. and J.R. Russell. 2002. Effects of source and concentrations of nitrogen and carbohydrate on ruminal microbial protein synthesis. *Turk. J. Vet. Anim. Sci.* 26:201-207.
- Hermann, M.L., J.R. Russell, and S.K. Barnhart. 2002. Evaluation of hay-type and grazing-tolerant alfalfa cultivars in season-long or complementary rotational stocking systems for beef cows. *J. Anim. Sci.* 80:768-779.
- Karsli, M.A. and J.R. Russell. 2001. Effects of some dietary factors on ruminal microbial protein synthesis. *Turk. J. Vet Anim. Sci.* 25:681-686.
- Sleugh, B.B., K.J. Moore, E.C. Brummer, A.D. Knapp, J. Russell, and L. Gibson. 2001. Forage nutritive value of various amaranth species at different harvest dates. *Crop Sci.* 41:466-472.
- Russell, J.R., K. Betteridge, D.A. Costall, and A.D. MacKay. 2001. Treading effects on water infiltration and sediment loss from New Zealand hill soil. *J. Range Manage.* 54:184-190.
- Nadeau, E.M.G., J.R. Russell, and D.R. Buxton. 2000. Intake, digestibility, and composition of orchardgrass and alfalfa silages treated with cellulase, inoculant, and formic acid to lambs. *J. Anim. Sci.* 78:2980-2989.
- Nadeau, E.M.G., D.R. Buxton, J.R. Russell, M.J. Allison, and J.W. Young. 2000. Enzyme, bacterial inoculant, and formic acid effects on silage composition of orchardgrass and alfalfa. *J. Dairy Sci.* 83:1487-1502.
- Cerrillo, M. A., J. R. Russell, and M. H. Crump. 1999. The effects of hay maturity and forage to concentrate ratio on digestion kinetics of goats. *Small Ruminant Research* 32:51-60.
- Karsli, M.A. and J.R. Russell. 1999. Factors affecting degradation kinetics and fractions of protein. *J. Konya Vet. Cont. Res Inst.* 10:42-47.
- Karsli, M. A., J. R. Russell, and M. J. Hersom. 1999. Evaluation of berseem clover as a supplement for corn crop residues. *J. Anim. Sci.* 77:2873-2882.

- Hitz, A. C. and J. R. Russell. 1998. Potential of Stockpiled Perennial Forages in Winter Grazing Systems for Pregnant Beef Cows. *J. Anim. Sci.* 76:404-415.
- Harmony, K.R., K. J. Moore, J. R. George, E. C. Brummer, and J. R. Russell. 1997. Determination of pasture biomass using four indirect methods. *Agron. J.* 89:665-672.
- Russell, J. R., M. R. Brasche and A. M. Cowen. 1993. Effects of grazing allowance and system on the use of corn crop residues by gestating beef cows. *J. Anim. Sci.* 71:1256-1265.
- Irlbeck, N. A., J. R. Russell, A. R. Hallauer and D. R. Buxton. 1993. Nutritive value and ensiling characteristics of maize stover as influenced by agronomic factors. *Anim. Feed Sci. Technol.* 41:51-64.
- Russell, J. R., N. A. Irlbeck, A. R. Hallauer and D. R. Buxton. 1992. Nutritive value and ensiling characteristics of maize herbage as influenced by agronomic factors. *Anim. Feed Sci. Technol.* 38:11.
- Russell, J. R., S. J. Yoder and S. J. Marley. 1990. Bale density, binding and storage surface effects on the preservation of large round bales. *Anim. Feed Sci. Technol.* 29:131-145.
- Adamu, A. M., J. R. Russell, A. D. McGilliard and A. Trenkle. 1989. Effects of added dietary urea on the utilization of maize stover silage by growing beef cattle. *Anim. Feed Sci. Technol.* 22:227-236.
- Adamu, A. M., J. R. Russell and A. Trenkle. 1988. Effects of ruminal degradability of the protein supplement on the utilization of maize stover silage by growing beef cattle. *Anim. Feed Sci. Technol.* 20:241-250.
- Brasche, M. R. and J. R. Russell. 1988. Influence of storage methods on the utilization of large round hay bales by beef cattle. *J. Anim. Sci.* 66:3218-3226.
- Buxton, D. R. and J. R. Russell. 1988. Lignin constituents and cell-wall digestibility of grass and legume stems. *Crop Sci.* 28:553-558.
- Buxton, D. R., J. R. Russell and W. F. Wedin. 1987. Structural monosaccharides and digestibility of stems of temperate grasses and legumes. *Crop Sci.* 27:1279-1285.
- Rojas-Bourrillon, A., J. R. Russell, A. Trenkle and A. D. McGilliard. 1987. Effects of rolling on the composition and utilization by growing steers of whole-plant corn silage. *J. Anim. Sci.* 64:303-311.
- Russell, J. R. 1985. Influence of harvest date on the nutritive value and ensiling characteristics of maize stover. *Anim. Feed Sci. Technol.* 14:11-27.

- Horst, R. L., T. A. Reinhardt, J. R. Russell and J. L. Napoli. 1984. The location of vitamin D2 and vitamin D3 from Medicago sativa (alfalfa plant). Arch. Biochem. Biophys. 231:67-71.
- Russell, J. R., A. W. Young and N. A. Jorgensen. 1981. Effect of dietary corn starch intake on ruminal, small intestinal and large intestinal starch digestion in cattle. J. Anim. Sci. 52:1170-1176.
- Russell, J. R., A. W. Young and N. A. Jorgensen. 1981. Effect of dietary corn starch intake on pancreatic amylase and intestinal maltase and pH in cattle. J. Anim. Sci. 52:1177-1182.
- Russell, J. R., A. W. Young and N. A. Jorgensen. 1980. Effect of sodium bicarbonate and limestone additions to high grain diets on feedlot performance and ruminal and fecal parameters in finishing steers. J. Anim. Sci. 51:996-1002.
- Russell, J. R., J. P. Hurst, N. A. Jorgensen and G. P. Barrington. 1978. Wet plant fractionation: Utilization of pressed alfalfa silage. J. Anim. Sci. 46:278-287.

B. Non-refereed invited papers:

- Russell, J.R., D.A. Bear, K.A. Schwarte, and M.M. Haan. 2010. Pasture management strategies to minimize the impacts of grazing on water quality of surface water resources. Presented in: Environmental Impact of Forage-Based Livestock Production Systems Symposium at the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, July 13, 2010, Denver, CO.
- Russell, J.R., M.M. Haan, and K.A. Schwarte. 2010. Managing phosphorus supplementation to enhance the economic and environmental sustainability of beef cow-calf operations. Presented at: Economic and Environmental Sustainability of Cow-calf Operations at the 2010 Meeting of the Midwestern Section of the American Dairy Science Association and American Society of Animal Science, March 16, 2010, Des Moines, IA.
- Russell, J.R. 2009. Grazing management to limit non-point source pollution in pastures. Presented in: Grazing Management for Water Quality Protection Webinar. Livestock and Poultry Environmental Learning Center, October 16, 2009. Website.
- Russell, J.R. and M.M. Haan. 2007. Grazing and nutritional management of beef cows to limit nonpoint source pollution of streams in Midwestern pastures. Presented in: Cow-calf Management Effects on Water Quality at the 2007 meeting of the Midwestern sections of the ASAS/ADSA, March 21, 2007, Des Moines, IA.
- Russell, J.R., J.D. Lawrence, and A. Trenkle. 2006. Integrated beef and crop production in a biofuel era: A case for interdisciplinary approaches. Presented in: Enterprise Integration for Sustainable Beef Production Symposium at 2006 ADSA/ASAS Joint Annual Meeting, July 13, 2006, Minneapolis, MN.

- Russell, J.R. and M. Haan. 2006. Use of GPS to evaluate the effects of grazing management of non-point pollution of pasture streams. Presented at: Grazing Behavior Workshop, July 24, 2006, State College, PA.
- Haan, M.M. J.R. Russell, W.J. Powers, S.K. Mickelson, S.I. Ahmed, J. Kovar, and R.C. Schultz. 2003. Effects of grazing management on sediment and phosphorus in run-off. IN: Proceedings of the Ninth International Symposium on Animal Agricultural and Food Processing Waste. October 12-15. Research Triangle Park, NC.
- Haan, M.M., J.R. Russell, W. Powers, J.L. Kovar, J.L. Boehm, S. Mickelson, S.I. Ahmed, and R. Schultz. 2003. Impacts of cattle grazing management on sediment and phosphorus loads in surface waters. IN: Proceedings of the Second National Conference on Grazing Lands. December 7-10. Nashville, TN.
- Bormann, K.J., W. Powers, and J.R. Russell. 2003. Effects of forage maturity on phosphorus digestion in beef cows. IN: Proceedings/Reports American Forage and Grassland Council. April 25-27, Lafayette, LA 12:258-262.
- Bormann, K.J., W. Powers, and J.R. Russell. 2003. Effects of forage maturity on phosphorus digestion in beef cows. IN: Proceedings of the Second National Conference on Grazing Lands. December 8-10, Nashville, TN.
- May, G.L., J.R. Russell, N.A. Janovick, J.D. Lawrence, D.R. Strohbehn, and D.G. Morrill. 2003. A Economic Comparison of year-round vs conventional grazing systems in Iowa. IN: Proceedings/Reports American Forage and Grassland Council. April 25-27, Lafayette, LA 12:216-220.
- Clark, J.T., J.R. Russell, W.D. Busby, D.L. Karlen, D.L. Maxwell, and B. Peterson. 2003. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. IN: Proceedings/Reports American Forage and Grassland Council. April 25-27, Lafayette, LA 12:286.
- Clark, J.T. and J.R. Russell. 2003. Effects of stocking rate and energy supplementation on performance and feed intake of heifers grazing stockpiled forages. IN: Proceedings/Reports American Forage and Grassland Council. April 25-27, Lafayette, LA 12:287.
- Haan, M.M., J.R. Russell, W. Powers, S. Mickelson, S.I. Ahmed, J. Kovar, and R. Schultz. 2003. Effects of grazing management on pasture production and phosphorus content of forage. IN: Proceedings/Reports American Forage and Grassland Council. April 25-27, Lafayette, LA 12:286.
- Powers, W., J. Russell, M.M. Haan, R. Schultz, E. Stauffer, G. Zaines, J. Hunkins, J. Kovar, J. Boehm, S. Mickelson, and S. Ahmed. 2002. Grazing systems to maximize forage and minimize P, N and sediment pollution of streams. pp. 23-35. IN: Proc. Agriculture and the Environment: The Challenge of Change. Ames, IA.

- Russell, J.R. 2002. Utilization of corn stalks and other crop residues to extend the grazing season. P. 68-79. IN: Proc. of the Winter Feeding and Feeding Systems for Cattle Professional Development Training Conference. Columbia, MO.
- Russell, J.R., M.M. Haan, W.G. Powers, J.L. Kovar, S. Mickelson., and R.C. Schultz. 2002. The potential for grazing management to control sediment and phosphorus pollution of pasture streams, 9 pp. IN: Proc. of the Iowa Forage Conference, West Des Moines, IA.
- Russell, J.R. 2002. Crop residues and improved annuals to extend the grazing season. 8 pp. IN: Proc. of the Integrating Livestock and Forage Conference, Moline, IL.
- Blummel, M.E. Zerbini, S. Fernandez-Rivera, A. Karsli, and J.R. Russell. 2002. Predicting efficiency of microbial production in diets by in situ and in vitro degradation characteristics in diet ingredients. Proc. Western Section, American Society of Animal Science 53:1-4.
- Barnhart, S.K., J.R. Russell, M.J. Hersom, and D.R. Farnham. 2001. Transgenic maize hybrid crop residues: nutritive value and their effects on performance of grazing beef cows. pp. 729-735. Proc of the XIX International Grassland Congress, San Paulo, Brazil.
- Russell, J.R., M. Hermann, S. Barnhart, D. Morriscal, J. Lawrence, J. Hitz, and A. D'Attilio. 2000. Managing alfalfa grazing for optimal animal productivity and legume persistence. 9 p. 2000 Iowa Forage Conference, Pella, IA.
- Russell, J.R. 2000. Year-round grazing to optimize the profitability of beef cow-calf production. 13 p. Presented at the 2000 Iowa Forage Conference, Pella, IA.
- Russell, J.R., M.J. Hersom, D.R. Strohbehn, D.G. Morriscal, and S.K. Barnhart. 1999. Extending the winter grazing season. IN: Proceedings of the Wisconsin Grazing Conference, Madison, WI.
- Russell, J.R. 1999. Forage availability affects supplementation of beef cows. IN: Proceedings of the Soil-Water-Plant-Animal Management Conference, Lancaster, WI.
- Betteridge, K., A. D. MacKay, J. R. Russell, D. A. Costall, and P. J. Budding. 1998. Effect of cattle treading on the soil and pasture resource and the wider environment. pp. 29-34. IN: Animal Production Systems and the Environment-Volume I.
- Kremer, S. M., J. R. Russell, D. R. Strohbehn, D. G. Morriscal, S. K. Barnhart, and A. M. Cowen. 1998. Pasture conditions at the initiation of grazing to optimize forage productivity. pp. 47-52. IN: Animal Production Systems and the Environment-Volume I.
- Hersom, M. J., J. R. Russell, A. Hallam, J. A. Lawrence, D. R. Strohbehn, D. G. Morriscal, S. K. Barnhart, D. R. Maxwell, and L. J. Secor. 1998. Development and Evaluation of a Year-round grazing system. pp. 73-78. IN: Animal Production Systems and the Environment-Volume I.

- Russell, J. R., A. M. Cowen, J. M. Western, J. A. Lawrence, and S. K. Barnhart. 1998. Evaluation of calf production from alfalfa-grass or smooth brome grass pastures grazed by different species. pp. 103-108. IN: Animal Production Systems and the Environment-Volume I.
- Russell, J. R., S. M. Jensen, M. J. Hersom, and R. Berryman. 1998. Evaluation of stockpiled berseem clover and sorghum x sudangrass hybrids as supplements for grazed corn stalks in beef cow wintering systems. pp. 545-550. IN: Animal Production Systems and the Environment-Volume II.
- Russell, J. R., J. K. Radke, A. C. Hitz, M. R. Brasche, A. M. Cowen, R. K. Berryman, D. R. Maxwell, and L. J. Secor. 1998. Grazing corn crop residues or stockpiled perennial forages to reduce winter feed costs for beef cow-calf producers. pp. 551-556. IN: Animal Production Systems and the Environment-Volume II.
- Russell, J. 1998. Determining the forage equipment needs for Your operation: A beef cow/calf nutritionist's viewpoint. Proceedings of the Annual Meeting of the Minnesota Forage and Grassland Council. 14 pp. Grand Rapids, MN.
- Russell, J. M. Hersom, A. Hallam, and J. Lawrence. 1998. Economics of forage systems for wintering beef cows. Proceedings of the Annual Meeting of the Minnesota Forage and Grassland Council. 8 pp. Grand Rapids, MN.
- Russell, J. M. Hersom, A. Hallam, and J. Lawrence. 1998. Extending the winter grazing season. Minnesota Cow-Calf Days. 8 pp. Pipestone, MN.
- Russell, J. R. 1998. Evaluating forage resources for winter grazing. Sustainable Agriculture Seminar Laboratory. 7 pp. Chariton, IA
- Russell, J. R. 1998. Risk management in winter grazing systems. Sustainable Agriculture Seminar Laboratory. 9 pp. Chariton, IA.
- Russell, J. R. 1998. Estimating forage productivity in pastures. 8 pp. Ames, IA.
- Russell, J. R., M. Hersom, A. Hitz, S. Barnhart, J. Secor, and D. Maxwell. 1998. Using tall fescue in a winter grazing season. pp. 35-40. Proceedings of the Management Intensive Grazing Symposium. November 24-25. Des Moines, IA.
- Russell, J. R., M. J. Hersom, A. Hallam, J. A. Lawrence, D. R. Strohbehn, D. G. Morrill, S. K. Barnhart, D. R. Maxwell, and L. J. Secor. 1997. Development and evaluation of a year-round grazing system. P. 4. Poster Abstracts of Sustainable Agriculture: Taking Stock, Moving Forward. Leopold Center Tenth Anniversary Conference, July 30-31. Ames, IA.
- Russell, J. R., A. M. Cowen, J. M. Western, J. A. Lawrence, S. K. Barnhart and M. R. Brasche. 1997. Evaluation of calf production from alfalfa-grass or smooth brome grass pastures grazed by different systems. P. 5. Poster Abstracts of Sustainable Agriculture:

- Taking Stock, Moving Forward. Leopold Center Tenth Anniversary Conference, July 30-31. Ames, IA.
- Russell, J. R., J. K. Radke, A. C. Hitz, M. R. Brasche, A. M. Cowen, R. K. Berryman, D. R. Maxwell, and L. J. Secor. 1997. Grazing corn crop residues or stockpiled perennial forages to reduce winter feed costs for beef cow-calf production. P. 6. Poster Abstracts of Sustainable Agriculture: Taking Stock, Moving Forward. Leopold Center Tenth Anniversary Conference, July 30-31. Ames, IA.
- Barnhart, S. and J. Russell. 1997. The how-to's of stockpiled grazing. P. 50. Proceedings of the Management Intensive Grazing Symposium. January 22-23. Newton, IA.
- Russell, J., D. Morrical, K. Moore, E. C. Brummer, J. Gerrish, M. Kerley, F. Martz, P. Beuselinck, and C. Roberts. 1997. Iowa State University-University of Missouri Collaborative Research Project. P. 14. Proceedings of the Management Intensive Grazing Symposium. January 22-23. Newton, IA.
- Russell, J., A. Hitz, D. Morrical, J. Radke, and J. Lawrence. 1996. Stretching the grazing season with crop residues and stockpiled forages. IN: Bartlett, B. (ed.) Great Lakes Grazing Conference, Battle Creek, MI.
- Russell, J., A. Hitz, D. Morrical, J. Radke, J. Lawrence, D. Maxwell, and J. Secor. 1996. Use of corn crop residues and stockpiled forages to make winter grazing work. Pp. 35-56. IN: Morrical, D. (ed.) Management Intensive Grazing Symposium. Iowa State University, Ames, IA.
- Russell, J., A. Hitz, M. Brasche, J. Lawrence, D. Maxwell, and Jim Secor. 1995. Stockpiled grazing: A low cost alternative to stored forages for wintering cattle. Pp. 37-53. IN: Management Intensive Grazing Symposium. Iowa State University, Ames, IA.
- Russell, J. R. and A. Mallarino. 1995. Manure management in grazing systems. Sustainable Agriculture Seminar, Iowa State University, Ames, IA.
- Russell, J. R. 1989. The role of agricultural systems on soil erosion in the United States. 13 pp. National Cattlemen's Association, Washington, D.C.
- Russell, J. R., A. M. Beck and M. R. Brasche, 1990. Letting Cows Harvest Forage Year-round. IN: Farming Systems for Iowa: Seeking Alternatives. 1990 Conference Proceedings. Leopold Center for Sustainable Agriculture. Ames, IA.
- Russell, J. R. 1990. Beef Cow Cornstalk Grazing. Pp. 115-124. IN: Proceedings of "The Low Input Sustainable Agriculture Beef and Forage Conference" Omaha, NE.
- C. Popular press.
- Russell, J. 2007. Stockpiled forages: Winter feed management to minimize cow-calf production costs. National Cattlemen 22(4):16 and 18.

Russell, J. 1997. Winter feed management to minimize cow-calf production costs: Stockpiled forages. *Forage Leader* 2(1):4 and 12.

Russell, J. 1996. Winter feed management to minimize cow-calf production costs: Corn crop residues. *Forage Leader* 1(3):8.

Russell, J. and R. Huhnke. 1996. Winter feed management to minimize cow-calf production costs: Large hay storage and feeding. *Forage Leader* 1(4):5-6.

Buxton, D. R. and J. R. Russell. 1986. Don't overlook the value of high quality forage. *Beef Magazine*, January Issue. pp. 72-75.

#### D. Published book reviews:

Russell, J. R. 1992. Review of "Forage in Ruminant Nutrition" by D. J. Minson. *Quarterly Review of Biology* 67:219.

#### E. Published abstracts:

Russell, J.R. and J.J. Bisinger. 2014. Improving soil health and productivity on marginal lands using managed grazing of livestock. *J. Anim. Sci.* 92 (E-Supplement 2):155.

Bisinger, J.J. and J.R. Russell. 2014. Stocking density effects in short duration grazing systems on botanical composition and soil characteristics of grasslands. *J. Anim. Sci.* 92 (E-Supplement 2):158.

Bisinger, J. and J. Russell. 2013. Effects of pasture size on the efficacy of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing cows. *J. Anim. Sci.* 91(Suppl. 2):92.

Kovar, J.L., H. Hongthanat, M.L. Thompson, J.R. Russell, and T.M. Isenhardt. 2013. Phosphorus source-sink relationships of stream sediments in the Rathbun Lake watershed in southern Iowa. 293-8. Abstracts of the 2013 ASA, CSSA, and SSSA International Annual Meetings, November 3-6, Tampa, FL.

Bisinger, J.J. and J.R. Russell. 2013. Enhancing botanical composition, wildlife habitat, and carbon sequestration of pastures in Southcentral Iowa through soil disturbance by mob-grazing of beef cattle. *Proceedings and Abstracts: 2013 Annual Conference of the American Forage and Grassland Council*. Covington, KY, CD-ROM

Bisinger, J. and J. Russell. 2012. Effects of pasture size of the efficacy of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing cows. *J. Anim. Sci.* 90(Suppl. 2):85.

Dunn, M.W., J.R. Russell, D.G. Morrical, S.K. Barnhart, and H.J. Sellers. 2012. Stocking system effects on soil and forage characteristics and performance of fall-calving cows grazing tall fescue pastures. *J. Anim. Sci.* 90(Suppl. 2):39.

- Russell, J.R., D.D. Loy, and M. Cecava. 2011. Potential of calcium oxide-treated corn stover and modified distillers grains as a partial replacement for corn grain in feedlot diets. Abstracts of the ADSA-ASAS Joint Annual Meeting, New Orleans, LA, CD-ROM Abstract T281.
- Bisinger, J.J. and J.R. Russell. 2011. Effects of pasture size on the efficacy of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing cattle. Proceedings and Abstracts: 2011 Annual Conference of the American Forage and Grassland Council. French Lick, IN, CD-ROM
- Dunn, M.W. and J.R. Russell. 2011. Stocking system effects on soil and forage characteristics and performance of fall-calving cows grazing tall fescue pastures. Proceedings and Abstracts: 2011 Annual Conference of the American Forage and Grassland Council. French Lick, IN, CD-ROM
- Bear, D.A., J.R. Russell, and D.G. Morrical. 2010. Effects of microclimate and pasture characteristics on temporal/spatial distribution of beef cows in Midwestern pastures. Abstracts of the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO, CD-ROM Abstract 92.
- Anderson, J.L., J.R. Russell, D.D. Loy, N.A. Pyatt, M.J. Cecava, and P.H. Doane. 2010. Effects of chemical treatment on the digestibility of corn stover in diets with modified distillers grains with solubles. Abstracts of the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO, CD-ROM Abstract M386.
- Russell, J.R., D.A. Bear, K.A. Schwarte, and M.M. Haan. 2010. Pasture management strategies to minimize the impacts of grazing on water quality of surface water resources. Abstracts of the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO, CD-ROM Abstract 634.
- Bear, D.A., J.R. Russell, D.G. Morrical, M. Tufekcioglu, T.M. Isenhardt, and J.L. Kovar. 2010. Stocking rate and botanical composition effects on the physical characteristics of the streamside zones of pastures. Abstracts of the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO, CD-ROM Abstract W316.
- Bear, D.A., Y.I. Cho, J.R. Russell, S.M. Ensley, and K.J. Yoon. 2010. Incidence of bovine enterovirus, coronavirus, and group A rotavirus, and concentration of total coliforms in Midwestern pasture streams. Abstracts of the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO, CD-ROM Abstract M317.
- Bear, D.A., J. R. Russell, and D.G. Morrical. 2010. Pasture management effects on nonpoint source pollution of Midwestern pastures. P. 209. Proceedings of the 4<sup>th</sup> Grazing Livestock Nutrition Conference, Estes Park, CO.
- Russell, J.R., S.M. Ensley, and K.-J. Yoon. 2010. Grazing management effects on pathogen loading of Midwestern Pasture Streams. USDA National Water Conference. Hilton Head, SC, February 21-25, 2010, CD-ROM

- Russell, J.R., D.A. Bear, K.A. Schwarte, M. Tufekcioglu, T.M. Isenhardt, J.L. Kovar, and D.G. Morrical. 2010. Pasture management effects on non-point source pollution of Midwestern watersheds. USDA National Water Conference. Hilton Head, SC, , February 21-25, 2010. CD-ROM
- Schwarte, K.A., J.R. Russell, and D.G. Morrical. 2010. Effects of pasture management and off-stream water on temporal/spatial distribution of cattle in cool-season grass pastures. Abstracts of the 2010 Meeting of the Midwestern Section of the American Dairy Science Association and American Society of Animal Science 88, E-Suppl. 3:97
- Schwarte, K.A., J.R. Russell, S. Ensley, K.J. Yoon, and D.G. Morrical. 2010. Effects of cattle presence on sediment, phosphorus, and pathogen loading of streams in cool-season grass pastures. Abstracts of the 2010 Meeting of the Midwestern Section of the American Dairy Science Association and American Society of Animal Science 88, E-Suppl. 3:81.
- Cho Y-I, Bear DA, Russell J, Ensley SM, Kim W-I, Yoon KJ. 2010. Survey of bovine enteric viruses in Midwestern pasture streams. Abstract, KSEA Midwest Regional Conference (not numbered).
- Webber, D.F., S.K. Mickelson, S.I. Ahmed, J.R. Russell, W.J. Powers, R.C. Schultz, and J.L. Kovar. 2010. Iowa Water Monitoring 10th Annual Conference, April 9-10, 2010, Iowa Department of Natural Resources, Scheman Continuing Education Building, Iowa State University, Ames, Iowa; poster presentation titled *Grazing and vegetative filter strip buffer effects on nutrient and sediment losses with runoff*.
- Webber, D.F., S.K. Mickelson, S.I. Ahmed, J.R. Russell, W.J. Powers, R.C. Schultz, and J.L. Kovar. 2010. Iowa Water Conference, March 8-9, 2010, Scheman Continuing Education Building, Iowa State University, Ames, Iowa; poster presentation titled *Grazing and vegetative filter strip buffer effects on nutrient and sediment losses with runoff*.
- Webber, D.F., S.K. Mickelson, S.I. Ahmed, J.R. Russell, W.J. Powers, R.C. Schultz, and J.L. Kovar. 2008. Agriculture and Environment Conference, February 26, 2008, Iowa Department of Agriculture and Land Stewardship, Scheman Continuing Education Building, Iowa State University, Ames, Iowa; poster presentation titled *Grazing and vegetative filter strip buffer effects on nutrient and sediment losses with runoff*.
- Webber, D.F., S.K. Mickelson, S.I. Ahmed, J.R. Russell, W.J. Powers, R.C. Schultz, and J.L. Kovar. 2008. Iowa Water Monitoring 8th Annual Conference, February 25, 2008, Iowa Department of Natural Resources, Scheman Continuing Education Building, Iowa State University, Ames, Iowa; poster presentation titled *Grazing and vegetative filter strip buffer effects on nutrient and sediment losses with runoff*.
- Russell, J.R., D.A. Bear, K. Schwarte, M.M. Haan, M. Tufekcioglu, N. Hongthanat, J.L. Kovar, T.M. Isenhardt, and D.G. Morrial. 2009. Pasture management effects on nonpoint source pollution of Midwestern watersheds. USDA National Water Conference, St. Louis, MO, CD-ROM.

- Russell, J.R., S.M. Ensley, and K.-J. Yoon. 2009. Grazing management effects on pathogen loading of Midwestern pasture streams. USDA National Water Conference, St. Louis, MO, CD-ROM.
- Bear, D.A. and Russell, J.R. 2009. Effects of microclimate and physical and botanical characteristics on temporal/spatial distribution of beef cows in Midwestern cool-season grass pastures. Proceedings and Abstracts: 2009 Annual Conference of the American Forage and Grassland Council. Grand Rapids, MI, CD-ROM
- Bear, D.A., Russell, J.R., Morrical, D.G., Tufekcioglu, M., Isenhardt, T.M., and Kovar, J.L. 2009. Effects of stocking rate and botanical composition on the physical characteristics of the riparian zones of Midwestern pastures. Proceedings and Abstracts: 2009 Annual Conference of the American Forage and Grassland Council. Grand Rapids, MI, CD-ROM
- Bear, D.A., J.R. Russell, M.M. Haan., and D.G. Morrical. 2009. Botanical characteristics and microclimate effects on the temporal and spatial distribution of beef cows in Midwestern pastures. Proceedings of the National Conference on Grazing Lands, Sparks, NV, CD-ROM
- Bear, D.A., J. Russell, Y.-I. Cho, S. Ensley, and K.-J. Yoon. 2009. Incidences of bovine enterovirus, coronavirus, rotavirus group A and concentrations of fecal coliforms in Midwestern pasture streams. Proceedings of the National Conference on Grazing Lands, Sparks, NV, CD-ROM
- Bear, D.A., J. Russell, D. Morrical, M. Tufekcioglu, T. Isenhardt, and J. Kovar. 2009. Stocking rate and botanical composition effects on physical characteristics of riparian zones in Midwestern pastures. Proceedings of the National Conference on Grazing Lands, Sparks, NV, CD-ROM
- Kovar, J.L. and Russell, J.R. 2009. Use of ground-based LiDAR to assess potential sediment loss from stream banks in grazed pastures. ASA/CSSA/SSSA International meetings abstracts, CD-ROM
- Schwarte, K.A. and Russell, J.R. 2009. Microclimatic effects on the temporal/spatial distribution of beef cows grazing cool-season grass pastures by different management practices. Proceedings and Abstracts: 2009 Annual Conference of the American Forage and Grassland Council. Grand Rapids, MI, CD-ROM
- Schwarte, K.A. and Russell, J.R. 2009. Grazing management effects on the sward and physical characteristics of cool-season grass pastures relative to streams. Proceedings and Abstracts: 2009 Annual Conference of the American Forage and Grassland Council. Grand Rapids, MI, CD-ROM.
- Tufekcioglu, M., Isenhardt, T.M., Kovar, J.L., Russell, J.R., and Schultz, R.C. 2009. Assessment of watershed and site-specific characteristics in relation to stream bank erosion. 11<sup>th</sup> North America Agroforestry Conference, Columbia, MO CD-ROM

- Tufekcioglu, M., Isenhardt, T.M., Zaimes, G.N., Schultz, R.C., Kovar, J.L., and Russell, J.R. 2009. Stream bank erosion from grazed pastures, grass filters, and forest buffers over a six-year period. 11<sup>th</sup> North America Agroforestry Conference, Columbia, MO CD-ROM
- Russell, J. R., M.M. Haan, D.A. Bear, Y.-I. Cho, S.M. Ensley, K.-J. Yoon, N. A. Cornick. 2008. Grazing Management Effects on Pathogen Loading of Midwestern Pasture Streams. USDA National Water Conference, Reno, NV.
- Russell, J.R. M.M. Haan, D.A. Bear, M. Tufekcioglu, N. Hongthanat, J.L. Kovar, T.M. Isenhardt, and D.G. Morrical. 2008. Pasture Management Effects on Nonpoint Source Pollution of Midwestern Watersheds. USDA National Water Conference, Reno, NV.
- Haan, M., J. Russell, D. Bear, and D. Morrical. 2008. Impacts of grazing management on cattle distribution and non-point source pollution from pastures in the central United States. International Grassland Congress, Hohhot, China.
- Lasley, P.W., J.R. Russell, D.G. Morrical, D.R. Strohbehn, and J.D. Lawrence. 2008. Distillers dried grains supplementation of stockpiled forage for fall-calving cows or calves over winter on performance of cows and calves. p. 85. Abstracts of the ASAS Midwest Section and ADSA Midwest Branch, Des Moines, IA.
- Lasley, P.W., J.R. Russell, D.G. Morrical, D.R. Strohbehn, and J.D. Lawrence. 2008. Effects of distillers dried grains supplementation of fall-calving cows or their calves grazing stockpiled forage over winter on calf performance in a pasture-based finishing program in the subsequent summer. p. 85. Abstracts of the ASAS Midwest Section and ADSA Midwest Branch, Des Moines, IA.
- Lasley, P.W. and J.R. Russell. 2008. Effects of distillers dried grain supplementation of smooth bromegrass hay on hay intake and diet digestibility. p. 78. Abstracts of the ASAS Midwest Section and ADSA Midwest Branch, Des Moines, IA.
- Assman, D., M.M. Haan, and J.R. Russell. 2008. Phosphorus concentrations of forage selected by grazing beef cattle. p. 77. Abstracts of the ASAS Midwest Section and ADSA Midwest Branch, Des Moines, IA.
- Haan, M., J. Russell, and D. Morrical. 2008. Grazing management effects on physical and nutritional characteristics of pastures. p. 413. Abstracts of the Annual Meeting of the ADSA and ASAS, Indianapolis, IN.
- Haan, M., J. Russell, and J. Kovar. 2008. Grazing management effects on selected stream bank characteristics and erosion. p. 413. Abstracts of the Annual Meeting of the ADSA and ASAS, Indianapolis, IN.
- Bear, D., J. Russell, and M. Haan. 2008. Microclimate effects on temporal/spatial distribution of beef cows in cool-season grass pastures. p. 371.. Abstracts of the Annual Meeting of the ADSA and ASAS, Indianapolis, IN.

- Haan, M., J. Russell, D. Bear, and D. Morrical. 2008. Grazing management microclimatic effects on cattle distribution patterns in riparian pastures. p. 372. Abstracts of the Annual Meeting of the ADSA and ASAS, Indianapolis, IN.
- Cho, Y.-I., J.R. Russell, W.-I. Kim, M.M. Haan, D.A. Bear, S.M. Ensley, and K.J. Yoon. 2008. Survey of bovine enteric viruses in Midwestern pasture streams. Conference for Research Workers in Animal Diseases, Chicago, IL
- Tufekcioglu, M., R. Schultz, G. Zaines, T. Isenhardt, J. Kovar, and J. Russell. 2008. Streambank erosion from grazed pastures, grass filters, and forest buffers over a six-year period. Abstracts of the Annual Meeting of the ASA, Houston, Tx.
- Kovar, J.L. and J.R. Russell. 2008. Use of Ground-Based LiDAR to Assess Potential Sediment Loss from Stream Banks in Grazed Pastures. ASA-CSSA-SSA
- Haan, M.M., J.R. Russell, J.D. Davis, and D.G. Morrical. 2007. Grazing management and microclimatic effects on cattle distribution patterns in riparian pastures. Proceeding/Reports of The 2007 Conference of the American Forage and Grassland Council 16:9.
- Haan, M.M., J. Russell, J. Kovar, and S. Nellesen. 2007. Effects of grazing management on stream bank erosion. Proceeding/Reports of the 2007 Conference of the American Forage and Grassland Council 16:18.
- Lasley, P., J.R. Russell, D.G. Morrical, D.R. Strohbehn, and J.D. Lawrence. 2007. Distillers dried grains supplementation of stockpiled forage for fall-calving cows or calves over winter on pre- and post-weaning performance of calves in a pasture finishing system. Proceeding/Reports of the 2007 Conference of the American Forage and Grassland Council 16:70.
- Lasley, P. and J. Russell. 2007. Effects of distillers dried grains supplementation of smooth bromegrass hay on hay intake and digestibility. Proceeding/Reports of The 2007 Conference of the American Forage and Grassland Council 16:89.
- Haan, M.M., J.R. Russell, and D.G. Morrical. 2007. Grazing management effects on forage mass and composition and ground cover within riparian pastures. Proceeding/Reports of The 2007 Conference of the American Forage and Grassland Council 16:149.
- Russell, J. and M. Haan. 2007. Grazing and nutritional management of beef cows to limit non-point source pollution of streams in Midwestern pastures. Abstracts of the 2007 Meeting of the Midwestern Sections of ADSA/ASAS. p. 74.
- Knock, R.C., A.H. Trenkle, E.J. Huff-Lonergan, S.M. Lonergan, J.R. Russell, K.M. Carnegey, and D.C. Beitz. 2007. Use of 25-Hydroxyvitamin D<sub>3</sub> to improve tenderness of beef from distiller's co-product-supplemented pasture- and feedlot-finished beef steers. Abstract 50. American Meat Science Association 60<sup>th</sup> Reciprocal Meat Conference. South Dakota State University, Brookings, SD.

- Haan, M., J. Russell, J. Davis, D. Morrical, D. Strohbehn, and W. Powers. 2006. Grazing Management Effects on cattle distribution patterns and implications for water quality. Proceedings of the 3<sup>rd</sup> National Conference on Grazing Lands, December 10-13, St. Louis, MO.
- Haan, M., J. Russell, J. Kovar, D. Morrical, D. Strohbehn, and W. Powers. 2006. Grazing management effects on the distribution of forage, bare ground, and fecal cover in pastures. Proceedings of the 3<sup>rd</sup> National Conference on Grazing Lands, December 10-13, St. Louis, MO.
- Haan, M., J. Russell, J. Kovar, S. Moeller, D. Morrical, and D. Strohbehn. 2006. Grazing management effects on stream morphology, stream bank condition, and stream bank erosion. Proceedings of the 3<sup>rd</sup> National Conference on Grazing Lands, December 10-13, St. Louis, MO.
- Haan, M., J. Russell, D. Morrical, D. Strohbehn, W. Powers, J. Lawrence, and J. Kovar. 2006. Effects of grazing management on pasture characteristics affecting sediment and nutrient loads in surface waters. *J. Anim. Sci.* 84(Suppl. 1):319.
- Haan, M., J. Russell, D. Morrical, D. Strohbehn, and W. Powers. 2006. Effects of grazing management on cattle distribution patterns. *J. Anim. Sci.* 84(Suppl. 1):389.
- Horst, R.L., K.T. Pecinovsky, K.J. Moore, D.J. Thoreson, J.R. Russell, E.C. Brummer, and J.P. Goff. 2006. Development of methodologies to reduce the DCAD of hays for transition cows. *J. Anim. Sci.* 84(Suppl. 1): 442.
- Driskill, R., J.R. Russell, D.R. Strohbehn, and D.G. Morrical. 2006. Effect of stocking rate and corn gluten feed supplementation on the performance of young beef cows grazing winter stockpiled tall fescue-red clover. *J. Anim. Sci.* 84(Suppl. 2):28
- Driskill, R., J.R. Russell, D.R. Strohbehn, and D.G. Morrical. 2005. Effect of stocking rate and corn gluten feed supplementation on bred second-calf heifers grazing stockpiled tall fescue-red clover pastures during winter. *J. Anim. Sci.* 83 (Suppl. 2):89-90.
- Panetta, D., W. Powers, and J.R. Russell. 2005. Metabolizable protein effects on ammonia emissions and nitrogen excretion by steers. *J. Anim. Sci.* 83 (Suppl. 1):395.
- Driskill, R., J.R. Russell, D.R. Strohbehn, and D.G. Morrical. 2005. Effect of stocking rate and corn gluten feed supplementation on bred, two-year old cows grazing stockpiled tall fescue-red clover pastures during winter. *Amer. Forage Grassl. Council* 14:45
- Driskill, R., J.R. Russell, K. Bormann, and W.J. Powers. 2004. Evaluating the use of indigestible neutral detergent fiber to predict dry matter intake of cattle fed high forage diets. *J. Anim. Sci.* 83 (Supp. 1):36

- Haan, M., J. Russell, W. Powers, S. Mickelson, R. Schultz, and J. Kovar. 2004. Effects of beef cow grazing management on sediment and phosphorus losses from smooth brome grass pastures. *J. Anim. Sci.* 83 (Supp. 1): 291.
- Russell, J.R., M.A. Parlett, K. Bormann, and W.J. Powers. 2004. Evaluation of different pasture sampling methods to simulate forage selected by grazing cattle. P. 64. IN: Abstracts for the annual meeting of the Midwestern section of the American Society of Animal Science and the Midwestern section of the American Dairy Science Association. March 15-17, Des Moines, IA.
- Clark, J.T., J.R. Russell, D.R. Strohbehn, J.D. Lawrence, and D.G. Morrical. 2004. Stocking rate and corn gluten feed supplementation effects on the performance of bred heifers grazing stockpiled tall fescue-red clover forage during winter. IN: Abstracts for the annual meeting of the Midwestern section of the American Society of Animal Science and the Midwestern section of the American Dairy Science Association. March 15-17, Des Moines, IA.
- Haan, M.M., J.R. Russell, W. Powers, R. Schultz, S. Mickelson, and J. Kovar. 2003. Effects of grazing management on sediment and phosphorus in pasture run-off. p. 60. IN: Abstracts for the annual meeting of the Midwestern section of the American Society of Animal Science and the Midwestern section of the American Dairy Science Association. March 17-19, Des Moines, IA.
- Clark, J.T., J.R. Russell, D.L. Karlen, W.D. Busby, D.L. Maxwell, and B. Peterson. 2003. Corn crop residue grazing effects on soil physical properties and soybean production in a corn-soybean crop rotation. p. 75. IN: Abstracts for the annual meeting of the Midwestern section of the American Society of Animal Science and the Midwestern section of the American Dairy Science Association. March 17-19, Des Moines, IA.
- Clark, J.T., J.R. Russell, D.R. Strohbehn, J.D. Lawrence, and D.G. Morrical. 2003. Winter grazing of stockpiled pastures to reduce costs of developing beef heifers. IN: Proceedings of the Second National Conference on Grazing Lands. December 8-10. Nashville, TN.
- Clark, J.T., J.R. Russell, W.D. Busby, D.L. Karlen, D.L. Maxwell, and B.C. Peterson. 2003. Effects of corn crop grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. IN: Proceedings of the Second National Conference on Grazing Lands. December 8-10. Nashville, TN.
- Clark, J.T., D.L. Karlen, and J.R. Russell. 2003. Soil quality indicator response to corn stalk grazing. IN: Proceedings of the Annual Meeting of the Agronomy Society of America, Crop Science Society of America, and Soil Science Society of America. November 2-6, Denver, CO.
- Janovick, N.A. and J.R. Russell. 2002. Year round grazing systems for fall- and spring-calving beef cows: winter grazing management. *J. Anim. Sci.* 29(Supp. 2):93.

- Janovick, N.A. and J.R. Russell. 2002. Year round grazing systems for fall- and spring-calving beef cows: summer grazing management. *J. Anim. Sci.* 29(Supp. 2):92.
- Haan, M. J. Russell, W. Powers, S. Mickelson, J. Kovar, and R. Schultz. 2002. Effects of grazing management on sediment and phosphorus run-off. *Proc. Amer. Forage Grassl. Council.* 11:292-296.
- Clark, J.T., J.R. Russell, D. Karlen, and D. Busby. 2002. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. *Proc. Amer. Forage Grassl. Council.* 11:227-231.
- Janovick, N.A. and J.R. Russell. 2001. Evaluation of calf and forage production in rotational stocking systems for spring- and fall-calving beef cows. *J. Anim. Sci.* 79(Supp. 1): 220.
- Russell, J.R., J.T. Clark, D.L. Karlen, W.D. Busby, L.J.Secor, B. Peterson, C.R. Olson, and S.C. Shouse. 2001. Corn crop residue grazing effects on soil physical properties and soybean production in a corn-soybean crop rotation. *J. Anim. Sci.* 79(Supp. 1):419.
- Janovick, N.A. and J.R. Russell. 2001. Evaluation of winter forage management systems for spring- and fall-calving cows. *J. Anim. Sci.* 79(Supp. 2):98.
- Russell, J.R., M.J. Hersom, M.M. Haan, M.L. Kruse, and D.G. Morrical. 2001. Effects of grazing crop residues from bt-corn hybrids on pregnant beef cows. *J. Anim. Sci.* 79(Supp. 2): 98.
- Russell, J.R., M.J. Hersom, A. Pugh, K. Barrett, and D. Farnham. 2000. Effects of grazing crop residues from bt-corn hybrids on the performance of gestating beef cows. *J. Anim. Sci.* 78(Supp. 2):79.
- Hermann, M.L. and J.R. Russell. 2000. Beef cow-calf and forage production and legume persistence from pastures containing hay type and grazing tolerant alfalfa cultivars grazed by different systems. *J. Anim. Sci.* 78(Supp. 2):80.
- Vander Pol, K.J. and J.R. Russell. 2000. The value of legume forage species for stockpiled forage grazing by calves. *J. Anim. Sci.* 78(Supp. 2):90.
- Hermann, M.L. and J.R. Russell. 1999. Beef cow-calf production from pastures containing hay-type and grazing tolerant alfalfa hybrids grazed by season-long or complementary stocking. *J. Anim. Sci.* 77(Supp. 1):203.
- Russell, J.R., M.J. Hersom, M.L. Hermann, K.J. Moore, and P.K. Patrick. 1999. Effects of hay composition on forage intake by beef heifers. *J. Anim. Sci.* 77(Supp. 1):207.
- Hersom, M.J. and J.R. Russell. 1999. Evaluation of forage management systems for spring-calving beef herds: Winter. *J. Anim. Sci.* 77(Supp. 1):210.

- Hersom, M.J. and J.R. Russell. 1999. Evaluation of forage management systems for spring-calving beef herds: Summer. *J. Anim. Sci.* 77(Suppl. 1):210.
- Kremer, S. M., J. R. Russell, D. R. Strohbehn, D. G. Morrical, and A. M. Cowen. 1998. Pasture conditions at the initiation of grazing to optimize forage productivity. *J. Anim. Sci.* 76(Suppl. 1):192.
- Hersom, M. J. and J. R. Russell. 1998. Evaluation of two forage systems for the year-round management of beef cows. *J. Anim. Sci.* 76(Suppl. 1):192.
- Russell, J. R., M. J. Hersom, and S. M. Kremer. 1998. Evaluation of stockpiled berseem clover or sorghum x sudangrass as supplements for grazed corn crop residues in beef cow wintering systems. *J. Anim. Sci.* 76(Suppl. 1):204.
- Karsli, M. A., J. R. Russell, and M. A. Cerrillo. 1998. The efficiency of ruminal microbial protein synthesis in sheep fed forages of differing nutritional quality. *J. Anim. Sci.* 76(Suppl. 1):357.
- Hersom, M. J. and J. R. Russell. 1997. Evaluation of sequential grazing of corn crop residues and stockpiled perennial forages to maintain beef cows during winter. *J. Anim. Sci.* 75 (Supplement 1):100.
- Hersom, M. J. and J. R. Russell. 1997. Rotational stocking of cool-season grass and legume pastures by beef cows with yearlings and/or hay harvest to remove excess forage. *J. Anim. Sci.* 75 (Supplement 1):202.
- Russell, J. R., M. J. Hersom, J. M. Western, K. J. Moore, and R. Kalton. 1997. Stockpiled berseem clover or brown midrib sorghum x sudangrass forages as supplements for beef cows grazing corn crop residues. *J. Anim. Sci.* 75 (Supplement 1):209.
- Western, J. M. and J. R. Russell. 1997. Cow-calf production from alfalfa-grass or smooth brome grass pastures rotationally grazed at three rates. *Alfalfa Grazing Symposium*, Omaha, NE. August 15-16, 1997.
- Hitz, A. C. and J. R. Russell. 1996. Efficacy of stockpiled perennial forage grazing to maintain beef cows during winter. *J. Anim. Sci.* 74(Suppl. 1):205.
- Western, J. M. and J. R. Russell. 1996. Cow-calf production from alfalfa-cool season grass or smooth brome grass pastures rotationally stocked at different rates. *J. Anim. Sci.* 74(Suppl. 1):205.
- Cerrillo, M. A., J. R. Russell, and M. H. Crump. 1996. Effect of grain supplementation on digestion of alfalfa-grass hay by goats. *J. Anim. Sci.* 74(Suppl. 1):79.
- Karsli, M. A. and J. R. Russell. 1996. Evaluation of stockpiled berseem clover as a supplement for corn crop residues for wintering beef cows. *J. Anim. Sci.* 74(Suppl. 1):78.

- Ghaffarzadeh, M., J. M. Western, J. R. Russell, M. S. Honeyman, R. M. Cruse, and D. Kent. 1996. Potential uses of annual berseem clover in livestock production. P. 82. IN: Morrill D. (ed.) Management Intensive Grazing Symposium, Iowa State University, Ames.
- Wunder, W. W., J. R. Russell, R. L. Orth, D. D. Crawley, and S. K. Barnhart. 1996. Raising dairy heifers on pasture. P. 83. IN: Morrill, D. (ed.) Management Intensive Grazing Symposium, Iowa State University, Ames.
- Western, J. M. and J. R. Russell. 1996. Effects of grazing systems on cow-calf production from alfalfa-cool season grass and smooth brome grass pastures. P. 87. IN: Morrill, D. (ed.) Management Intensive Grazing Symposium, Iowa State University, Ames.
- Hitz, A. C., J. R. Russell, and M. R. Brasche. 1995. Stockpiled forages for wintering beef cows. *J. Anim. Sci.* 73:99.
- Nadeau, E. M., D. R. Buxton, J. R. Russell, E. Lingren, and P. Lingvall. 1995. Cellulase, formic acid and inoculant effects on intake, digestibility and digestion kinetics of orchardgrass and alfalfa silages. Presented at the national meeting of the American Society of Agronomy.
- Nadeau, E. M., D. R. Buxton, J. R. Russell, E. Lindgren, and P. Lingvall. 1995. Intake and digestion of orchardgrass and alfalfa silages treated with cellulase, formic acid and inoculant. *Abstracts of the Conference on Rumen Function.* 23:4.
- Russell, J. R. 1995. Forage intake of beef cows grazing smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil by different stocking systems. *Abstracts of the Conference on Rumen Function.* 23:43.
- Western, J. M. and J. R. Russell. 1995. Factors determining intake of beef cows grazing smooth brome grass of alfalfa-grass pastures. *Abstracts of the Conference on Rumen Function.* 23:43.
- Brasche, M. R., M. Ghaffarzeh, J. Russell, M. Honeyman, R. Cruse, and D. Kent. 1995. Potential uses of berseem clover in livestock systems. P. 96. IN: Management Intensive Grazing Symposium, Iowa State University, Ames, IA.
- Russell, J., M. Brasche, and S. Barnhart. 1995. Cow-calf production from smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil grazed by continuous or rotational grazing. P. 93. IN: Management Intensive Grazing Symposium, Iowa State University, Ames, IA.
- Western, J., J. Russell, A. Cowen, M. Brasche, and J. Lawrence. 1995. Effects of grazing on cow-calf production from alfalfa-cool season grass and smooth brome grass pastures. P. 94. IN: Management Intensive grazing Symposium, Iowa State University, Ames, IA.

- Russell, J. R., M. R. Brasche and A. M. Cowen. 1994. Factors controlling forage dry matter intake by beef cows grazing grass and grass-legume pastures by different systems. Poster Abstracts for the National Conference on Forage Quality, Evaluation and Utilization, Lincoln, NE, p. 34.
- Thorstensson, E.M.G., D. R. Buxton and J. R. Russell. 1994. Use of enzymes to reduce cell-wall concentration and increase forage digestibility. Poster Abstracts for the National Conference on Forage Quality, Evaluation and Utilization, Lincoln, NE, p. 37.
- Russell, J. R. and M. R. Brasche. 1994. Cow-calf production of smooth brome-grass-orchardgrass pastures with or without birdsfoot trefoil under different stocking systems. *J. Anim. Sci.* 72(Suppl. 1):169.
- Hitz, A. C., J. R. Russell, M. R. Brasche and K. Becker. 1994. Evaluation of stockpiled forage grazing in beef cattle wintering systems. *J. Anim. Sci.* 72(Suppl. 1):169.
- Abdullah, M., J. W. Young, H. D. Tyler, J. R. Russell and A. R. Hippen. 1994. Effect of high forage diets and replacing nonstructural carbohydrate with supplemental fat in dairy cows. *J. Anim. Sci.* 72(Suppl. 1):349.
- Russell, J. R. and M. R. Brasche. 1993. Effects of stocking system on cow-calf production from smooth brome-grass-orchardgrass pastures with or without birdsfoot trefoil. *J. Anim. Sci.* 71(Suppl. 1):182.
- Russell, J. R. and T. E. Diaz-Munoz. 1993. Evaluation of ensiled broiler litter as a supplement for baled cornstalks for growing cattle. *J. Anim. Sci.* 71(Suppl. 1):186.
- Thorstensson, E., D. R. Buxton, J. R. Russell, and J. W. Young. 1993. Enzyme, inoculant, and formic acid effects on silage quality. Presented at the 1993 Meeting of the American Society of Agronomy. Cincinnati, OH.
- Cowen, A. M., J. R. Russell and M. R. Brasche. 1992. Grazing management effects on cow-calf production from alfalfa-grass and smooth brome-grass pastures. *J. Anim. Sci.* 70(Suppl. 1):183.
- Russell, J. R., M. R. Brasche and A. M. Cowen. 1992. Effects of grazing system on the utilization of corn crop residues for gestating beef cows. *J. Anim. Sci.* 70(Suppl. 1):187.
- Brasche, M. R., J. R. Russell and J. M. Figland. 1992. Cow-calf production from smooth brome-grass-orchardgrass pastures with or without birdsfoot trefoil grazed by two systems. Presented at "Building Bridges" The Third Annual Sustainable Agriculture Conference, The Leopold Center for Sustainable Agriculture, Ames, IA.
- Cowen, A. M., J. R. Russell and M. R. Brasche. 1992. Effects of grazing systems of cow-calf production from alfalfa-cool season grass and smooth brome-grass pastures. Presented at "Building Bridges" The Third Annual Sustainable Agriculture Conference, The Leopold Center for Sustainable Agriculture, Ames, IA.

- Russell, J. R., M. R. Brasche and A. M. Cowen. 1992. Corn crop residue grazing systems for wintering beef cows. Presented at "Building Bridges" The Third Annual Sustainable Agriculture Conference, The Leopold Center for Sustainable Agriculture, Ames, IA.
- Russell, J. R. and A. M. Beck. 1991. Effects of grazing systems on cow-calf production and sward characteristics from alfalfa-grass and smooth bromegrass pastures. P. 183. Second Grazing Livestock Nutrition Conference. Steamboat Springs, CO.
- Beck, A. M., J. R. Russell and M. R. Brasche. 1991. Grazing systems of alfalfa-grass and smooth bromegrass pastures for beef cow-calf production. P. 84. IN: E. F. Weber (ed.). Setting priorities: Research, Practice and Policy for a More Sustainable Agriculture. Leopold Center for Sustainable Agriculture, Ames, IA.
- Russell, J. R., M. R. Brasche and A. M. Beck. 1991. Grazing system effects on sward characteristics from legume-grass and grass pastures. *J. Anim. Sci.* 69(Suppl. 1):277.
- Beck, A. M., J. R. Russell and M. R. Brasche. 1991. Grazing system effects on cow-calf production from legume-grass and grass pastures. *J. Anim. Sci.* 69(Suppl. 1):263.
- Figland, J. M. and J. R. Russell. 1991. Effects of moisture content and ensilation on the composition, intake and digestibility of broiler litter. *J. Anim. Sci.* 69(Suppl. 1):139.
- Beck, A. M., J. R. Russell, J. M. Campbell and M. R. Brasche. 1990. Grazing system effects on beef cow-calf production from alfalfa-grass pastures. *J. Anim. Sci.* 68(Suppl. 1):576.
- Brasche, M. R., J. R. Russell, A. M. Beck and D. M. Knapp. 1990. Hay composition effects in different depths of large round bales on the accuracy of core-sampling methods. *N. Anim. Sci.* 68(Suppl. 1):582.
- Russell, J. R., A. M. Beck, M. R. Brasche and J. M. Figland. 1990. Cow grazing system effects on sward characteristics of alfalfa-grass pastures. *J. Anim. Sci.* 68(Suppl. 1):583.
- Russell, J. R., M. R. Brasche and A. M. Beck. 1990. Stocking rate effects on the performance of gestating beef cows grazing corn stalks. *J. Anim. Sci.* 68(Suppl. 1):578.
- Russell, J. R., A. M. Beck and M. R. Brasche. 1989. Effects of Cr concentration and particle size of mordanted fibers on kinetic passage and fecal output estimates. Conference on Rumen function 20:69.
- Beck, A. M. and J. R. Russell. 1989. Influence of chromium concentration and particle size of mordanted fiber on passage kinetic and fecal output estimations. *J. Anim. Sci.* 67(Suppl. 1):577.
- Clemons, S. D. and J. R. Russell. 1989. Chemical treatment and particle size effects on ruminal cell wall digestion kinetics and cellulolytic microorganism colonization of corn stover. *J. Anim. Sci.* 67(Suppl. 1):290.

- Hsiao, J.-C. and J. R. Russell. 1988. The effect of storage treatment of large round bales of alfalfa hay on its value as a supplement for corn stover. *J. Anim. Sci.* 66(Suppl. 1):166.
- Russell, J. R., S. J. Yoder and S. J. Marley. 1988. Storage characteristics of large round bales of alfalfa-bromegrass hay as influenced by bale density, binding and storage surface. *J. Anim. Sci.* 66(Suppl. 1):366.
- Brasche, M. R. and J. R. Russell. 1987. Effect of storage treatment of large round bales on the composition and utilization of beef cows of alfalfa or bromegrass hay. *J. Anim. Sci.* 65(Suppl. 1):345.
- Hsiao, Y.-C., M. D. Hanigan, M. R. Brasche and J. R. Russell. 1987. Influence of chromium concentration of mordanted fiber on digestive kinetics and fecal output estimations. *Biennial Conference on Rumen Function* 19:6.
- Brasche, M. R. and J. R. Russell. 1986. Hay composition in different layers of large round bales, stored outside, and its influence on the accuracy of different methods of core-sampling. *J. Anim. Sci.* 63(Suppl. 1):301.
- Brasche, M. R. and J. R. Russell. 1986. Effect of storage method and grinding on the utilization of alfalfa-bromegrass hay from large round bales by gestating beef cows. *J. Anim. Sci.* 63(Suppl. 1):301.
- Buxton, D. R. and J. R. Russell. 1986. Cell-wall digestibility in stems of maturing temperate legumes and grasses. *Proc. of 1986 Forage and Grassl. Conf.*, p. 117. AFGC, Lexington, KY.
- Russell, J. R. and D. R. Buxton. 1986. The influence of bale density and propionic acid treatment on the storage of large round bales of high- and low-moisture hay. *J. Anim. Sci.* 63(Suppl. 1):125.
- Sanderson, M. A., J. S. Hornstein, J. R. Russell, W. F. Wedin and D. R. Buxton. 1986. In situ digestion of cell walls from alfalfa stems. *Agron. Abstracts* p. 144.
- Adamu, A. M. and J. R. Russell. 1985. The effects of varying the concentration of ruminal ammonia on the utilization of corn stover silage by growing beef cattle. *Abstr. of the 18<sup>th</sup> Mtg. of the Midwestern Section of the ASAS.* P. 132.
- Rojas-Bourrillon, A., J. R. Russell, A. Trenkle and A. D. Mcgilliard. 1985. The composition and digestibility of corn silage which was rolled during harvest. *J. Dairy Sci.* 68(Suppl. 1):156.
- Russell, J. R., D. R. Buxton and M. D. Kenealy. 1985. The storage characteristics of large bales of alfalfa-grass hay treated with propionic acid in the liquid form or bound to verxite. *J. Dairy Sci.* 68(Suppl. 1):153.

- Irlbeck, N. A., J. R. Russell, A. R. Hallauer and D. R. Buxton. 1985. Effect of variety, plant density, generation and harvest date on composition of fresh and ensiled whole corn plants and corn stover. *J. Anim. Sci.* 61(Suppl. 1):359.
- Russell, J. R. and D. R. Buxton. 1984. Storage of large round bales of alfalfa-grass hay treated with sodium diacetate and/or covered with plastic. *J. Anim. Sci.* 59(Suppl. 1):293.
- Adamu, A. M., J. R. Russell and A. Trenkle. 1984. Effect of varying the ruminal degradability of protein on feedlot performance of heifers fed corn stover. *J. Anim. Sci.* 59(Suppl. 1):456.
- Kuehl, B., J. R. Russell, A. R. Hallauer and D. R. Buxton. 1984. Effect of variety, plant density and harvest date on the nutritive value of fresh and ensiled whole corn plants and corn stover. *J. Anim. Sci.* 59(Suppl. 1):454.
- Farquhar, A. S. and J. R. Russell. 1984. Influence of stage of maturity and heat and alkali treatment on the rate and extent of ruminal fiber digestion in alfalfa. *Proc. Of 1984 Forage and Grassl. Conf.*, p. 218. AFGC, Lexington, KY.
- Russell, J. R. 1983. The effect of harvest date on the nutritive value of corn stover for silage. *Abstr. of 16<sup>th</sup> Mtg. of the Midwestern Section of the ASAS.*
- Rennick, K. K. and J. R. Russell. 1980. The effects of monensin supplementation of baled corn stover in lactating beef cows. *J. Anim. Sci.* 55(Suppl. 1):391.
- Russell, J. R., A. W. Young, N. A. Jorgensen and K. B. Smith. 1978. The effect of dietary starch level on starch digestion and the activities of pancreatic amylase and intestinal maltase. *J. Dairy Sci.* 61(Suppl. 1):186.
- Russell, J. R., N. A. Jorgensen and G. P. Barrington. 1974. Comparison of mechanically pressed and wilted alfalfa silages for dairy cattle. *J. Dairy Sci.* 57(Suppl. 1):618.

#### F. General audience publications.

- Bisinger, J., J. Russell, D. Morrical, J. Sellers, and H. Offenburger. 2014. Enhancing botanical composition and wildlife habitat of pastures in southcentral Iowa through soil disturbance by mob-grazing of beef cattle. AS Leaflet R2888. 2014 Animal Industry Report. Iowa State University, Ames.
- Bisinger, J. and J. Russell. 2013. Enhancing botanical composition and wildlife habitat of pastures in south central Iowa through soil disturbance by mob-grazing of beef cattle. AS Leaflet R2779. 2013 Animal Industry Report, Iowa State University, Ames.
- Pille, K. and J. Russell. 2013. Effects of season and soil available phosphorus content on the phosphorus concentrations of the forage in cool-season grass pastures of southeastern Iowa. AS-Leaflet-R2777. 2013 Animal Industry Report, Iowa State University, Ames.

- Dunn, M., J. Russell, D.G. Morrical, S. Barnhart, and J. Sellers. 2012. Stocking system effects on soil and forage characteristics and performance of fall-calving cows grazing cool-season grass pastures. A.S. Leaflet R2691. 2012 Animal Industry Report. Iowa State University. Ames, IA.
- Bisinger, J. and J. Russell. 2012. Effects of pasture size on the efficacy of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing cows. A.S. Leaflet R2692. 2012 Animal Industry Report. Iowa State University, Ames, IA.
- Russell, J. 2012. Pasture management and water quality. pp. 20-21. Getting into Soil and Water 2012. Deborah McDonough (ed.). Iowa Water Center, Iowa State University, Ames, IA.
- Russell, J.R., D. Loy, J. Anderson, and M. Cecava. 2011. Potential of calcium oxide-treated corn stover and modified distillers grains as a partial replacement for corn grain in feedlot diets. R2586. Iowa State University Animal Industry Report 2011, Iowa State University, Ames.
- Bisinger, J.J. and J.R. Russell. 2011. Effects of pasture size on the efficacy of off-stream water or restricted stream access to alter the spatial/temporal distribution of grazing cattle. R2613. Iowa State University Animal Industry Report 2011, Iowa State University, Ames.
- Dunn, M.W. and J.R. Russell. 2011. Stocking system effects on soil and forage characteristics and performance of fall-calving cows grazing tall fescue pastures. R2585. Iowa State University Animal Industry Report 2011, Iowa State University, Ames.
- Bear, D.A., Y.-I. Cho, J.R. Russell, S. Ensley, and K.-J. Yoon. 2010. Incidence of Bovine Enterovirus, Coronavirus, and Group A Rotavirus, and concentration of Total Coliforms in Midwestern pasture streams. R2532. 2010 Animal Industry Report. Iowa State University, Ames.
- Bear, D.A., J.R. Russell, and D.G. Morrical. 2010. Cattle Temporal & Spatial Distribution in Midwestern Pastures Using Global Positioning (A Three-Year Progress Report). R2509. 2010 Animal Industry Report. Iowa State University, Ames.
- Schwarte, K.A., J.R. Russell, and D.G. Morrical. 2010. Microclimate Effects on the Temporal/Spatial Distribution of Beef Cows Grazing Cool-Season Grass Pastures by Different Management Practices. R2529. 2010 Animal Industry Report. Iowa State University, Ames.
- Schwarte, K.A. and J.R. Russell. 2010. Grazing management effects on streambank characteristics and surface run-off into pasture streams. R2530. 2010 Animal Industry Report. Iowa State University, Ames.

- Bear, D.A. and J. Russell. 2009. Cattle temporal and spatial distribution in Midwestern pastures using global positioning (A progress report). R2402. Iowa State University Animal Industry Report 2009. Ames, IA
- Schwarte, K.A. and J.R. Russell. 2009. Grazing management effects on the sward and physical characteristics relative to streams in cool-season grass pastures. R2439. Iowa State University Animal Industry Report 2009. Ames, IA
- Schwarte, K.A. and J.R. Russell. 2009. Microclimate effects on the temporal/spatial distribution of beef cows grazing cool-season grass pastures by different management practices. R2440. Iowa State University Animal Industry Report 2009. Ames, IA
- Bear, D.A., J.R. Russell, D.G. Morrical, M. Tufekcioglu, T.M. Isenhardt, and J.L. Kovar. 2009. Effects of stocking rate and botanical composition on the physical characteristics of the riparian zones of pastures (A two-year progress report). R2441. Iowa State University Animal Industry Report 2009. Ames, IA
- Bear, D.A., Y.-I. Cho, J.R. Russell, S.M. Ensley, K.-J. Yoon. 2009. Incidence of bovine enterovirus, coronavirus, and group A rotavirus and concentration of fecal coliforms in Midwestern pasture streams. R2442. Iowa State University Animal Industry Report 2009. Ames, IA
- Bear, D.A. and J. Russell. 2009. Cattle temporal and spatial distribution in Midwestern pastures using global positioning (A progress report). McNay Research Farm 2009 Annual Report. Iowa State University. Ames, IA
- Bear, D.A., J.R. Russell, D.G. Morrical, M. Tufekcioglu, T.M. Isenhardt, and J.L. Kovar. 2009. Effects of stocking rate and botanical composition on the physical characteristics of the riparian zones of pastures (A two-year progress report). McNay Research Farm 2009 Annual Report. Iowa State University. Ames, IA
- Bear, D.A., Y.-I. Cho, J.R. Russell, S.M. Ensley, K.-J. Yoon. 2009. Incidence of bovine enterovirus, coronavirus, and group A rotavirus and concentration of fecal coliforms in Midwestern pasture streams. ). McNay Research Farm 2009 Annual Report. Iowa State University. Ames, IA
- Russell, J. 2009. Iowa State Research: Management techniques successful in limiting pollution of pasture streams. Growing Beef Iowa Beef Center's monthly newsletter. Vol 2. Iowa Beef Center, Iowa State University, Ames, IA
- Russell, J. and S. Shouse. 2008. A Guide to Managing Pasture Water: Stabilized Stream and Pond Access Sites. Iowa State University Extension IBC08-02.
- Haan, M. M., J.R. Russell, D. Morrical, and D. Strohbehn. 2008. Effect of grazing management on cattle distribution patterns in relation to pasture streams. A.S. Leaflet R2268. Animal Industry Report, Iowa State University.

- Lasley, P.W., J.R. Russell, D.R. Strohbehn, D.G. Morrical, and J.D. Lawrence. 2008. Effects of distillers dried grains supplementation of fall-calving cows or calves grazing stockpiled forage over winter on performance of calves in a pasture-based finishing program in the subsequent summer. A.S. Leaflet R2269. Animal Industry Report, Iowa State University.
- Lasley, P.W., J.R. Russell, D.R. Strohbehn, D.G. Morrical, and J.D. Lawrence. 2008. Distillers dried grains supplementation of fall-calving cows or calves grazing stockpiled forage during winter. A.S. Leaflet R2270. Animal Industry Report, Iowa State University.
- Haan, M.M., D. Assman, and J.R. Russell. 2008. Phosphorus, crude protein, and digestible dry matter concentrations of forage selected by grazing beef cattle. A.S. Leaflet R2271. Animal Industry Report, Iowa State University.
- Lasley, P.W. and J.R. Russell. 2008. Effects of distillers dried grains with solubles supplementation of smooth bromegrass hay on hay intake and digestibility. A.S. Leaflet R2272. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, D. Morrical, and D. Strohbehn. 2008. Effects of grazing management on the physical and nutritional characteristics of pastures. A.S. Leaflet R2323. Animal Industry Report, Iowa State University.
- Russell, J.R., D.A. Bear, M.M. Haan, M. Tufekcioglu, T.M. Isenhardt, and J.L. Kovar. 2008. Effects of stocking rate and botanical composition on the physical characteristics of the riparian zones of pastures. A.S. Leaflet R2324. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, J. Kovar, D. Morrical, and D. Strohbehn. 2008. Effects of grazing management on selected stream bank characteristics and stream bank erosion. A.S. Leaflet R2325. Animal Industry Report, Iowa State University.
- Lasley, P.W., J.R. Russell, D.R. Strohbehn, D.G. Morrical, and J.D. Lawrence. 2007. Distillers dried grains supplementation of fall-calving cows or calves grazing stockpiled forage during winter. A.S. Leaflet R2186. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, D.G. Morrical, and D.R. Strohbehn. 2007. Effect of grazing management on cattle distribution patterns in relation to pasture streams. A.S. Leaflet R2205. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, D.G. Morrical, and D.R. Strohbehn. 2007. Effects of grazing management on forage sward height, mass, and nutrient concentrations and the proportions of fecal cover and bare soil in pastures. A.S. Leaflet R2206. Animal Industry Report, Iowa State University.

- Haan, M.M., J.R. Russell, J. Kovar, S. Nellesen, D. Morrival, and D. Strohbehn. 2007. Effects of grazing management on selected stream bank characteristics and stream bank erosion. A.S. Leaflet R2207. Animal Industry Report, Iowa State University.
- Lasley, P.W., J.R. Russell, D.R. Strohbehn, D.G. Morrival, and J.D. Lawrence. 2007. Distillers dried grains supplementation of fall-calving cows or calves grazing stockpiled forage during winter. A.S. Leaflet R2186. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, D.G. Morrival, and D.R. Strohbehn. 2007. Effect of grazing management on cattle distribution patterns in relation to pasture streams. A.S. Leaflet R2205. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, D.G. Morrival, and D.R. Strohbehn. 2007. Effects of grazing management on forage sward height, mass, and nutrient concentrations and the proportions of fecal cover and bare soil in pastures. A.S. Leaflet R2206. Animal Industry Report, Iowa State University.
- Haan, M.M., J.R. Russell, J. Kovar, S. Nellesen, D. Morrival, and D. Strohbehn. 2007. Effects of grazing management on selected stream bank characteristics and stream bank erosion. A.S. Leaflet R2207. Animal Industry Report, Iowa State University.
- Russell, J.R., D.G. Morrival, D. Strohbehn, W. Powers, S. Moeller, and J. Kovar. 2006. Effects of grazing management on pasture characteristics affecting sediment and phosphorus pollution of pasture streams (Progress Report). A.S. Leaflet R2122. Animal Industry Report, Iowa State University.
- Russell, J., R. Driskill, D. Morrival, D. Strohbehn, S. Barnhart, and J. Lawrence. 2006. Effects of stocking rate and corn gluten feed supplementation on performance of two-year old cows grazing stockpiled forage during winter. A.S. Leaflet R2065. Animal Industry Report, Iowa State University.
- Haan, M., J. Russell, D. Morrival, D. Strohbehn, W. Powers, S. Moeller, and J. Kovar. 2006. Impacts of beef cattle-Grazing systems on cattle distribution and stream bank erosion. ISRF-05-16,30. Progress Report for the ISU Central Iowa Research Farms.
- Haan, M.M., J.R. Russell, W. Powers, J.L. Kovar, J.L. Boehm, S. Mickelson, and R. Schultz. 2005. Impacts of cattle grazing management on sediment and phosphorus loads in surface waters. A.S. Leaflet R1997. Iowa State University.
- Driskill, R., J.R. Russell, D.R. Strohbehn, and D.G. Morrival. 2005. Effects of stocking rate and corn gluten feed supplementation on bred second-calf heifers grazing stockpiled tall fescue-red clover pastures. A.S. Leaflet R1998. Iowa State University.
- Haan, M.M., J.R. Russell, W.J. Powers, J.L. Kovar, R. Schultz, and S. Mickelson. 2004. Impacts of cattle grazing management on sediment and phosphorus loads in surface waters. 2004 Report of the McNay and Rhodes Research and Demonstration Farms. 3 p. Available at: <http://www.ag.iastate.edu/farms/03reports/mcnay/Impactsofcattle.pdf>

- Haan, M.M., J.R. Russell, W. Powers, J.L. Boehm, S. Mickelson, R. Schultz, and J.L. Kovar. 2004. Impacts of cattle grazing management on sediment and phosphorus loads in surface waters. A.S. Leaflet 1921. 2004 Iowa State University Animal Industry Report. 5 p. Available at: <http://www.iowabeefcenter.org/pdfs/BRR/R1921.pdf> (Accessed 5/4/04).
- Clark, J.T, J.R. Russell, D.R. Strohhahn, J.D. Lawrence, and D.G. Morrical. 2004. Effects of stocking rate and corn gluten feed supplementation on growth and intake of bred heifers grazing stockpiled tall fescue-red clover forages during winter. A.S. Leaflet 1879. 2004 Iowa State University Animal Industry Report. 10 p. Available at: <http://www.iowabeefcenter.org/pdfs/BRR/R1879.pdf> (Accessed 5/4/04).
- Clark, J., J. Russell, D. Karlen, D. Busby, B. Peterson, L. Pellack, and D. Maxwell. 2003. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. A.S. Leaflet R1837. 2003 Beef Research Report-Iowa State University. 11 p. Available at: <http://www.iowabeefcenter.org/pdfs/BRR/R1837.pdf> (Accessed 1/24/04).
- Haan, M.M., J. Russell, W. Powers, S. Mickelson, S.I. Ahmed, J. Kovar, and R. Schultz. 2003. Effects of grazing management on pasture production and phosphorus content of forage (A progress report). A.S. Leaflet R1835. 2003 Beef Research Report-Iowa State University. 4 p. Available at: <http://www.iowabeefcenter.org/pdfs/BRR/R1835.pdf> (Accessed 1/24/04).
- Haan, M.M., J.Russell, W. Powers, S. Mickelson, S.I. Ahmed, J. Kovar, and R. Schultz. 2003. Effects of grazing management on sediment and phosphorus losses in run-off (A progress report). A.S. Leaflet R1836. 2003 Beef Research Report-Iowa State University. 5 p. Available at: <http://www.iowabeefcenter.org/pdfs/BRR/R1836.pdf> (Accessed 1/24/04).
- Janovick, N.A., J.R. Russell, D.R. Strohhahn, D.G. Morrical, S.K. Barnhart, D. Maxwell, and L.J.Secor. 2002. Integration of year-round forage management systems for spring-calving and fall-calving beef cows. A.S. Leaflet R.1778. IN: 2002 Beef Research Report-Iowa State University, Ames, IA.
- Clark, J., J. Russell, D. Karlen, D. Busby, L.J. Secor, B. Peterson, L. Pellack, C. Olsen, D. Maxwell, and S. Shouse. 2002. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation. A.S. Leaflet R.1784. IN: 2002 Beef Research Report-Iowa State University, Ames, IA.
- Haan, M.M., J. Russell, W. Powers, S. Mickelson, S.I. Ahmed, J. Kovar, and R. Schultz. 2002. Effects of grazing management on sediment and phosphorus run-off. A.S. Leaflet R.1783. IN: 2002 Beef Research Report-Iowa State University, Ames, IA.
- Russell, J.R and W. Miller. 2002. Making Extended Grazing Work in Iowa. 4 pp. IBC-23. Iowa Beef Center. Iowa State University, Ames, IA.

- Russell, J.R., M.J. Hersom, M.M. Haan, M. Kruse, P.M. Dixon, D.G. Morrical, and D.E. Farnham. 2001. Effects of grazing crop residues from bt-corn hybrids on performance of pregnant beef cows. pp. 32-41. IN: 2001 Beef Research Report. Iowa State University, Ames, IA.
- Janovick, N.A., J.R. Russell, D.R. Strohbehn, D.G. Morrical, S.K. Barnhart, D. Maxwell, and L.J. Secor. 2001. Evaluation of year-round forage management systems for spring- and fall-calving beef cows. pp. 42-53. IN: 2001 Beef Research Report. Iowa State University, Ames, IA.
- Clark, J.T., J.R. Russell, D. Karlen, D. Busby, L.J. Secor, B. Peterson, L. Pellack, C. Olsen, and S. Shouse. 2001. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation (A progress report). pp. 54-61. IN: 2001 Beef Research Report. Iowa State University, Ames, IA.
- Clark, J.T., J.R. Russell, D. Karlen, D. Busby, L.J. Secor, B. Peterson, L. Pellack, C. Olsen, and S. Shouse. 2001. Effects of corn crop residue grazing on soil physical properties and subsequent soybean production in a corn-soybean crop rotation (A progress report). 2000 Progress Report. Armstrong Research and Demonstration Farm, Iowa State University, Ames, IA.
- Janovick, N.A., J.R. Russell, D. Maxwell, and L.J. Secor. 2001. Evaluation of year-round forage management systems for spring- and fall-calving beef cows. 2000 Progress Report. McNay Research and Demonstration Farm, Iowa State University, Ames, IA.
- Russell, J.R., N. Janovick, D.R. Strohbehn, D.G. Morrical, S.K. Barnhart, D. Maxwell, and L.J. Secor. 2000. Integrating the use of spring- and fall-calving beef cows in a year-round grazing system. pp. 35-40. 2000 Beef Research Report. Iowa State University, Ames, IA.
- Russell, J.R., S.M. Kremer, and D.R. Strohbehn. 2000. Effects of pasture conditions in spring on seasonal forage productivity. pp. 41-55. IN: 2000 Beef Research Report. Iowa State University, Ames, IA.
- Russell, J.R., D. Farnham, R.K. Berryman, M.J. Hersom, A. Pugh, and K. Berrett. 2000. Nutritive value of the crop residues from bt-corn hybrids and their effects on performance of grazing beef cows. pp. 56-61. IN: 2000 Beef Research Report. Iowa State University, Ames, IA.
- Hermann, M.L., J.R. Russell, S.K. Barnhart, and R. Berryman. 2000. Evaluation of hay-type and grazing tolerant alfalfa hybrids in season-long and complementary rotational stocking systems for beef cows. pp. 62-68. IN: 2000 Beef Research Report. Iowa State University, Ames, IA.
- Hersom, M.J., J.R. Russell, S.K. Barnhart, J.D. Lawrence, A. Hallam, L.J. Secor, and D.R. Maxwell. 1999. Management systems that increase uniformity of the forage supply for

- year-round grazing by spring-calving herds. pp. 35-46. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Russell, J.R., M.J. Hersom, M.L. Hermann, K.J. Moore, and P.K. Patrick. 1999. Effects of chemical composition on forage intake of heifers fed hays of different species. pp. 47-52. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Karsli, M.A. and J.R. Russell. 1999. Ruminant microbial protein synthesis in sheep fed forages of varying nutritive values. pp. 53-59. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Hermann, M.L., J.R. Russell, S.K. Barnhart, and R. Berryman. 1999. Evaluation of hay-type and grazing tolerant alfalfa hybrids in season-long or complementary rotational stocking systems for beef cows. pp. 60-64. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Karsli, M.A., J.R. Russell, K. Albrecht, R.A. Zemenchick, and E.J. Bures. 1999. Changes in chemical composition and digestion kinetics of stockpiled kura clover in late fall. pp. 65-66. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Kremer, S.M., J.R. Russell, D.R. Strohbehn, D.G. Morrill, S.K. Barnhart, and A.M. Cowen. 1999. Pasture conditions at the initiation of grazing to optimize forage productivity. A progress report. pp. 67-71. IN: 1999 Beef Research Report. Iowa State University, Ames, IA.
- Hermann, M., J. Russell, and R. Berryman. 1998. Alfalfa persistence and cow-calf productivity in intensive stocking systems. pp. 60. Proceedings of the Management Intensive Grazing Symposium. November 24-25. Des Moines, IA.
- Hersom, M. J., J. R. Russell, A. Hallam, J. A. Lawrence, D. R. Strohbehn, D. G. Morrill, S. K. Barnhart, D. R. Maxwell, L. J. Secor, and D. R. Maxwell. 1998. The development, evaluation, and demonstration of management systems which increase uniformity of the forage supply for year-round grazing by spring calving herds. pp. 61. Proceedings of the Management Intensive Grazing Symposium. November 24-25. Des Moines, IA.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1998. Evaluation of a year-round grazing system: Winter progress report. pp. 63-68. 1998 Beef Research Report-Iowa State University.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1998. Evaluation of a year-round grazing system: Summer cow-calf progress report. pp. 69-72. 1998 Beef Research Report-Iowa State University.
- Jensen, S. M., M. Hersom, J. R. Russell, and R. Berryman. 1998. Evaluation of stockpiled berseem clover and brown midrib sorghum x sudangrass as supplements for grazed cornstalks in beef cow wintering systems. pp. 73-78. . 1998 Beef Research Report-Iowa State University.

- Karsli, M. A. and J. R. Russell. 1998. The effect of maturity and frost killing of forages on degradation kinetics and escape protein concentration. pp. 82-89. . 1998 Beef Research Report-Iowa State University.
- Karsli, M. A. and J. R. Russell. 1998. The effect of heat treatment of forages on degradation kinetics and escape protein concentration. pp. 90-95. . 1998 Beef Research Report-Iowa State University.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1998. Evaluation of a year-round grazing system: Winter progress report. pp. 50-55. 1997 Annual Progress Reports. McNay Memorial Research and Demonstration Farm.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1998. Evaluation of a year-round grazing system: Summer cow-calf progress report. pp. 56-59. 1997 Annual Progress Reports. McNay Memorial Research and Demonstration Farm.
- Hersom, M., J. Russell, D. Maxwell, and L. J. Secor. 1997. Evaluation of a year-round grazing system for beef cows. P. 5. Proceedings of the Management Intensive Grazing Symposium. January 22-23. Newton, IA.
- Hersom, J., J. Russell, D. Maxwell, and L. J. Secor. 1997. Use of stockers for excess forage removal in a year-round grazing system. P. 6. Proceedings of the Management Intensive Grazing Symposium. January 22-23. Newton, IA.
- Hallam, A., J. D. Lawrence, J. Russell, and M. Hersom. 1997. Economics of stockpiled grazing programs. P. 24. Proceedings of the Management Intensive Grazing Symposium. January 22-23. Newton, IA.
- Western, J. M., J. R. Russell, and R. Berryman. 1997. Cow-calf production from alfalfa grass or smooth brome grass pastures rotationally grazed at three stocking rates. pp. 109-113. 1997 Beef Research Report. Iowa State University.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1997. Evaluation of a year-round grazing system: Summer cow-calf progress report. pp. 114-117. 1997 Beef Research Report. Iowa State University.
- Hersom, M. J., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1997. Evaluation of a year-round grazing system: Winter progress report. pp. 118-122. 1997 Beef Research Report. Iowa State University.
- Russell, J. R., M. J. Hersom, K. J. Moore, R. Kalton, and R. Berryman. 1997. Evaluation of stockpiled berseem clover and sorghum x sudangrass as supplements for grazed cornstalks in beef cow wintering systems. pp. 123-127. 1997 Beef Research Report. Iowa State University.
- Russell, J., A. Hitz, D. Morrill, J. Radke, and J. Lawrence. 1996. Stretching the grazing season with crop residues and stockpiled forages. IN: Bartlett, B. (ed.) Great Lakes Grazing Conference, Battle Creek, MI.

- Russell, J., A. Hitz, D. Morrill, J. Radke, D. Maxwell, and J. Secor. 1996. Use of corn crop residues and stockpiled forages to make winter grazing work. Pp. 35-56. IN: Morrill, D. (ed.) Management Intensive Grazing Symposium. Iowa State University, Ames.
- Russell, J. R. 1996. Winter feed management to minimize cow-calf production costs: Stockpiled forages. IN: 1996 Decisions for cow-calf producers. Extension SP-42. Iowa State University, Ames.
- Russell, J. R. 1996. Winter feed management to minimize cow-calf production costs: Hay storage and feeding. IN: 1996 Decisions for cow-calf producers. Extension SP-43. Iowa State University, Ames.
- Russell, J. R. 1996. Winter feed management to minimize cow-calf production costs: Corn crop residues. IN: 1996 Decision for cow-calf producers. Extension SP-44. Iowa State University, Ames.
- Russell, J. R., D. R. Maxwell, and L. J. Secor. 1996. Cow-calf production from smooth brome-grass-orchardgrass pastures with or without birdsfoot trefoil grazed from different systems. Pp. 38-31. IN: Russell, J. R. (ed.) 1995 Annual Progress Report of the McNay Memorial Research and Demonstration Farm. Chariton, IA.
- Hitz, A. C., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1996. Efficacy of grazing stockpiled perennial forages for winter maintenance of beef cows. Pp. 57-66. IN: Russell, J. R. (ed.) 1995 Annual Progress Report of the McNay Memorial Research and Demonstration Farm. Chariton, IA.
- Western, J. M., J. R. Russell, and R. Berryman. 1996. Cow-calf production from alfalfa-grass or smooth brome-grass pastures rotationally grazed at different stocking rates. Pp. 111-115. IN: 1996 Beef Research Report-Iowa State University, Ames.
- Hitz, A. C., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1996. Efficacy of grazing stockpiled perennial forages for winter maintenance of beef cows. Pp. 116-125. IN: 1996 Beef Research Report-Iowa State University, Ames.
- Russell, J. R., M. A. Karsli, M. Oba, and R. K. Berryman. 1996. Use of stockpiled berseem clover as a supplement for grazed corn crop residues. Pp. 126-129. IN: 1996 Beef Research Report-Iowa State University, Ames.
- Ghaffarzadeh, M., J. M. Western, J. R. Russell, M. S. Honeyman, R. M. Cruse, and D. Kent. 1996. Forage-based beef production research at the Armstrong Outlying Research Farm. Pp. 130-135. IN: 1996 Beef Research Report-Iowa State University, Ames.
- Russell, J. R., M. R. Brasche, D. R. Maxwell, and L. J. Secor. 1995. Cow-calf production from smooth brome-grass-orchardgrass pastures with or without birdsfoot trefoil grazed by different systems. Pp. 122-124. IN: 1995 Beef Research Report AS-630. Iowa State University, Ames, IA.

- Western, J. M., J. R. Russell, M. R. Brasche, and R. Berryman. 1995. Stocking rate effects on cow-calf production from rotationally grazed alfalfa-grass or smooth brome grass pastures. pp. 125-129. IN: 1995 Beef Research Report AS-630. Iowa State University, Ames, IA.
- Brasche, M. R., M. Ghaffarzeh, J. R. Russell, M. S. Honeyman, R. Cruse, and D. Kent. 1995. Forage-based beef production research at the Armstrong Outlying Research Farm. pp. 130-132. IN: 1995 Beef Research Report AS-630. Iowa State University, Ames, IA.
- Hitz, A. C., J. R. Russell, M. R. Brasche, D. R. Maxwell and L. J. Secor. 1995. Effectiveness of grazing stockpiled forages to maintain beef cows during the winter. Pp. 133-139. 1995 Beef Research Report AS-630. Iowa State University, Ames, IA.
- Russell, J. R., M. R. Brasche, S. K. Barnhart, D. R. Maxwell, and L. J. Secor. 1994. Cow-calf production from smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil grazed by continuous or rotational systems. Pp. 35-40. Annual Progress Reports-1993. McNay Outlying Research Farm, Chariton, IA.
- Brasche, M. R., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1994. Effectiveness of grazing stockpiled forages to maintain beef cows during the winter. Pp. 41-46. Annual Progress Reports-1993. McNay Outlying Research Farm, Chariton, IA.
- Russell, J. R., M. R. Brasche, S. K. Barnhart, D. R. Maxwell, and L. J. Secor. 1994. Cow-calf production from smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil grazed by continuous or rotational systems. 1994 Beef Research Report. Iowa State University. A.S. Leaflet R1152.
- Brasche, M. R., J. R. Russell, D. R. Maxwell, and L. J. Secor. 1994. Effectiveness of grazing stockpiled forages to maintain beef cows during the winter. 1994 Beef Research Report. Iowa State University. A.S. Leaflet R1153.
- Russell, J. R., M. R. Brasche and R. Berryman. 1994. Corn crop residue grazing for wintering beef cows. 1994 Beef Research Report. Iowa State University. A.S. Leaflet R1155.
- Russell, J. R., M. R. Brasche, D. R. Maxwell and L. J. Secor. 1993. Cow-calf production from smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil grazed by different systems: A progress report. 1993 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R1034.
- Russell, J. R., M. R. Brasche, J. K. Radke, and R. K. Berryman. 1993. Effects of stocking system for grazing corn crop residues on beef cow performance, residue yields, and soil physical properties. 1993 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R1035.

- Beck, A. M., J. R. Russell and M. R. Brasche. 1992. Effects of grazing systems on cow-calf production from alfalfa-cool season grass or smooth brome grass pastures. 1992 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R899.
- Brasche, M. R., J. R. Russell and J. M. Figland. 1992. Cow-calf production from smooth brome grass-orchardgrass pastures with or without birdsfoot trefoil in two grazing systems. 1992 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R900.
- Russell, J. R., M. R. Brasche, A. M. Beck, J. Radke and E. C. Berry. 1992. Corn crop residue grazing systems for wintering beef cows. 1992 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R901.
- Diaz, T. E., J. R. Russell, M. Rasmussen and M. A. Allison. 1992. Evaluation of cellulolytic activity during ruminal digestion of corn leaves, cornstalks and cornstalks treated with alkaline hydrogen peroxide. 1992 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R902.
- Figland, J. M. and J. R. Russell. 1991. Effects of moisture content and ensiling on the composition, intake and digestibility of broiler litter. 1991 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R837.
- Russell, J. R., M. R. Brasche and A. M. Beck. 1991. Effects of grazing systems on the utilization of corn crop residues by gestating beef cows. 1991 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R799.
- Beck, A. M. and J. R. Russell. 1991. Effects of grazing systems on alfalfa-grass and smooth brome grass pastures on cow production. 1991 Beef & Sheep Research Report. Iowa State University. A.S. Leaflet R797.
- Russell, J. R., A. M. Beck and J. M. Campbell. 1990. Evaluation of grazing systems for beef cows. Pp. 25-27. 1990 Iowa State University Beef-Sheep Research Report. A.S. Leaflet R692.
- Russell, J. R., M. R. Brasche and D. M. Knapp. 1990. Hay composition at varying depths of large round bales and its relation to core sampling. Pp. 33-34. 1990 Iowa State University Beef-Sheep Research Report. A.S. Leaflet R697.
- Russell, J. R. and A. M. Beck. 1990. Effect of stocking rate on the utilization of corn stalks by grazing beef cows. Pp. 35-37. 1990 Iowa State University Beef-Sheep Research Report. A.S. Leaflet R698.
- Russell, J. R. and S. D. Clemons. 1990. Influence of chemical treatments on the digestion of corn stover. Pp. 38-40. 1990 Iowa State University Beef-Sheep Research Report. A.S. Leaflet R699.

- Beck, A. M. and J. R. Russell. 1990. Evaluation of markers for estimating forage intake by grazing cattle. Pp. 116-117. 1990 Iowa State University Beef-Sheep Research Report. A.S. Leaflet R736.
- Russell, J. R. 1989. Optimal efficiency in the use of Iowa's energy, soil and feed resources for beef production. Pp. 28-30. 1989 Iowa State University Beef-Sheep Research Report. AS-597.
- Russell, J. R., Y.-C. Hsiao and D. M. Knapp. 1989. Storage treatment effects on the value of large round bales of alfalfa-smooth bromegrass hay as a supplement for corn stover. Pp. 23-24. 1989 Iowa State University Beef-Sheep Research Report. AS-597.
- Russell, J. R., S. J. Yoder and S. J. Marley. 1989. Bale density, binding and storage surface effects on the preservation of large round bales. Pp. 25-28. 1989 Iowa State University Beef -Sheep Research Report. AS-597.
- Brasche, M. R. and J. R. Russell. 1987. The influence of storage method of large round bales of alfalfa or bromegrass on the performance of gestating beef cows (progress report). Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R447.
- Hsiao, Y.-C. and J. R. Russell. 1987. The effect of storage method of large round bales of alfalfa hay on its value as a supplement for corn stover (progress report). Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R446.
- Brasche, M. R. and J. R. Russell. 1986. Effect of protective treatment and/or grinding on the utilization of hay from large round bales by beef cows (progress report). Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R415.
- Brasche, M. R. and J. R. Russell. 1986. Composition of hay in different depths within large round bales and its influence on whole bale composition determined by differing core-sampling methods. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R416.
- Irlbeck, N. A., J. R. Russell, A. R. Hallauer and D. R. Buxton. 1986. Influence of corn hybrid, generation and plant density on the nutritive value of whole plant and corn stover silages (progress report). Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R414.
- Russell, J. R. and D. R. Buxton. 1986. Effect of hay moisture, bale density and propionic acid treatment on the storage characteristics and nutritive value of large round bales of alfalfa-grass hay. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R413.
- Adamu, A. M., J. R. Russell and A. Trenkle. 1985. Influence of type and level of protein supplement on the utilization of corn stover silage by beef heifers. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R362.
- Russell, J. R. 1985. Effect of cellulase treatment on the nutritive value of corn stover. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R363.

- Russell, J. R. and D. R. Buxton. 1985. Effect of sodium diacetate and/or plastic covers on the storage characteristics of large round bales. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R359.
- Russell, J. R., D. R. Buxton and M. D. Kenealy. 1985. Effect of propionic acid treatment on the storage of large round bales. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R360.
- Russell, J. R., B. Kuehl, A. R. Hallauer and D. R. Buxton. 1985. Influence of corn hybrid, plant density and harvest date on the nutritive value of whole plant and corn stover silages. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R361.
- Russell, J. R., B. Steinick and B. Lindholm. 1982. Effect of harvest date and additives on the quality of corn stover silage. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R339.
- Russell, J. R., E. Mallarino and B. Steinick. 1981. Effect of harvesting method and length of storage on the nutritional value of corn stover. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R328.
- Russell, J. R. and K. K. Rennick. 1980. The effects of monensin and protein supplementation on utilization of ensiled corn stover by growing beef heifers. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R308.
- Russell, J. R. and K. K. Rennick. 1980. The effects of monensin supplementation of baled corn stover on utilization by lactating beef cows. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R310.
- Russell, J. R. and W. F. Wedin. 1980. The effect of stocking rate and grain supplementation of gain of yearling steers. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R316.
- Wedin, W. F., C. P. West, J. R. Russell and R. L. Vetter. 1979. Progress report: Efficiency of grazing study—McNay Memorial Research Center. Iowa State Univ. Coop. Ext. Serv. A.S. Leaflet R295.
- Jorgensen, J. A., J. R. Russell, A. W. Young and R. J. Vathauer. 1978. Buffers in ruminant rations. Proc. Nutr. School for Feedmen, Eau Claire, WI.
- Russell, J. R., N. A. Jorgensen and G. P. Barrington. 1974. Progress report and potential for the use of residue and protein concentrate of alfalfa in feeding dairy cattle. Proc. 4<sup>th</sup> Annu. Alfalfa Symp., Univ. of Wis.-Madison.

#### G. Books

- Barnhart, S., D. Morrill, J. Russell, K. Moore, P. Miller, and C. Brummer. Pasture Management Guide for Livestock Producers. PM-1713, June 1998.

#### H. Book chapters

Karlen, D. L., J. R. Russell and A. P. Mallarino. 1995. A Systems Engineering Approach for Utilizing Animal Manure. IN: J. Hadfield and C. Stewart (ed.) Advances in Soil Science. Effective Management of Animal Manures as a Resource. American Society of Agronomy, Madison, WI.

Satter, L. D., M. S. Allen, C. A. Rotz, J. R. Russell, M. A. Anderson, R. L. Vetter and L. R. Vough. 1996. Plant-Animal Interface. Utilization and Quality-Conserved Forages. Pp. 31-46. IN: W. F. Wedin (ed.) Innovative Uses of Forage/Pasture/Rangeland, American Forage and Grassland Council, Lexington, KY.

#### I. Videotapes

Russell, J. R. 1995. Managed Grazing. Year Around Resource Management. Iowa State University Extension Communications, Ames, IA.

#### J. Computer software

Russell, J. R. 1998. 'Forage Budgeting for Year-round Grazing' Spreadsheet.

Russell, J. R. 1998. 'Estimating Forage Productivity in Pastures' Spreadsheet.

**XI. GRANTS AND CONTRACTS (Funded, 1999-present).**

Date	Title	Investigators	Agency	Amount
7/99-6/02	Winter grazing of corn residue effects on soil physical properties and subsequent crop yields from a corn-soybean crop rotation.	J.R. Russell D. Busby L. J. Secor J. Radke (USDA-NSTL) D. Karlen (USDA-NSTL) A. P. Mallarino J. D. Lawrence S. Shouse C. Olsen B. Peterson (USDA-NRCS)	Leopold Center for Sustainable Agriculture	\$103,350
2/99-9/01	Cattle treading effects on soil quality, crop productivity, and pasture health.	J.R. Russell D. Karlen (USDA-NSTL) K. Betteridge (New Zealand AgResearch) P. Singleton (New Zealand AgResearch)	USDA-Foreign Agricultural Service	\$29,490
7/99-6/02	Complementary grazing systems for beef cattle production	K. J. Moore B. A. Brueland M. H. Wiedenhoft J. R. George E. C. Brummer S. K. Barnhart J. R. Russell	Leopold Center for Sustainable Agriculture	\$61,983
9/98-9/01	The development, evaluation, and demonstration of management systems which increase uniformity of the forage supply for year-round grazing by spring- and fall-calving beef cow herds	J. R. Russell D. G. Morrical D. R. Strohhahn S. K. Barnhart J. D. Lawrence A. Hallam L. J. Secor	Leopold Center for Sustainable Agriculture	\$150,000

10/99-9/02	Improved Grazing Systems for Beef Cattle Production (NC-225 Regional Project)	J.R. Russell K.J. Moore C.J. Brummer D.G. Morriscal S.K. Barnhart J.D. Lawrence Plus Animal Science and Agronomy Staff from the University of Missouri, University of Nebraska, and Kansas State University	NC Regional Directors	\$150,000 (ISU research)
1/01-12/03	Impacts of Managed Grazing on Stream Ecology and Water Quality	J.R. Russell W. Powers R.C. Schultz T. Isenhardt S. Mickelson J. Kovar C. Balvanz (Iowa Beef Cattlemens' Association)	Iowa Department of Natural Resources 319 Grants Program	\$550,000
7/01-6/04	Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures	J.R. Russell W. Powers R.C. Schultz T. Isenhardt S. Mickelson J. Kovar	Leopold Center for Sustainable Agriculture	\$105,000
7/01-6/04	Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures	J.R. Russell W. Powers R.C. Schultz T. Isenhardt S. Mickelson J. Kovar	Iowa Water Resources Research Institute	\$64,500
7/03-6/05	Use of Grazing Management to Limit the Contribution of Stream Bank Erosion and Manure Deposition to Sediment and Phosphorus Pollution of Pasture Streams	J.R. Russell W.J. Powers J.L. Kovar J.D. Lawrence	Iowa Water Resources Research Institute	\$43,302

6/04-6/07	Use of Grazing Management to Limit Sediment and P Pollution of Pasture Streams from Stream Bank Erosion and Manure Deposition	J.R. Russell W.J. Powers J.L. Kovar, USDA National Soil Tilth Laboratory D.R. Strohbehn D.G. Morrical J.D. Lawrence B. Peterson, USDA-NRCS	Iowa Department of Natural Resources Section 319 Program	\$337,439
7/04-6/07	Quantifying the Role of Riparian Management to Control Non-point Source Pollution of Pasture and Cropland Streams	J.R. Russell W.J. Powers R.C. Schultz D.R. Strohbehn D.G. Morrical J. Kovar, USDA National Soil Tilth Laboratory B. Peterson, USDA-NRCS	Leopold Center for Sustainable Agriculture Ecology Initiative	\$324,723
9/04-8/05	Winter grazing of stockpiled grass-legume forages to reduce costs of developing beef heifers	J.R. Russell D.R. Strohbehn D.G. Morrical J. D. Lawrence	Leopold Center for Sustainable Agriculture Ecology Initiative	\$28,613
5/05-4/09	Source reduction and mitigation strategies for air emissions from turkeys, laying hens, and growing cattle	W.J. Powers Todd Applegate, Purdue University J.R. Russell	USDA-NRI	\$482,424
7/05-6/08	Winter grazing systems for fall-calving cows producing calves for grass-based beef production systems	J.R. Russell D.G. Morrical D.R. Strohbehn J.D. Lawrence	Leopold Center for Sustainable Agriculture	\$85,818
10/06-9/09	Pasture management effects on non-point source pollution of Midwestern watersheds	J.R. Russell W. Powers D.G. Morrical J.L. Kovar T.M. Isenhardt	USDA-CSREES National Integrated Water Quality Program 406	\$598,461
6/07-5/10	Grazing management effects on pathogen loading of Midwestern pasture streams	J.R. Russell S.M. Ensley K.-J. Yoon	USDA-CSREES NRI	\$399,770

4/09-3/12	Site specific implementation of practices that alter the spatial/temporal distribution of grazing cattle to improve water quality of pasture streams in the Rathbun Lake watershed	J.R. Russell	Leopold Center for Sustainable Agriculture Agroecology Initiative	\$65,312
1/09-12/10	Site specific implementation of practices that alter the spatial/temporal distribution of grazing cattle to improve water quality of pasture streams in the Rathbun Lake watershed	J.R. Russell	Iowa Beef Center	\$3,000
1/09-12/10	Effect of moisture content and chemical treatment on storage stability and animal feed value of corn stover harvested using a single-pass technology	J.R. Russell D. Loy	Archer Daniels Midland	\$65,372
1/10-12/11	Effects of chemical treatment of corn crop residues on feedlot performance of beef steers and nutrient digestion by sheep in diets with modified distillers grains with solubles	J.R. Russell D. Loy	Archer Daniels Midland	\$96,368
3/10-6/12	Use of mob grazing to improve cattle production, enhance legume establishment, and increase carbon sequestration in Iowa pastures	J.R. Russell D.G. Morrical H.J. Sellers	Leopold Center for Sustainable Agriculture Agroecology Initiative	\$79,657
10/10-9/11	Planning grant for a proposal on a regional approach to climate change planning for dairy and beef production systems	W. Powers et al. (Including J.R. Russell)	USDA-NIFA	\$50,000
3/11-3/14	Enhancing Botanical Composition, Wildlife Habitat, and Carbon Sequestration of Pastures in South Central Iowa	J. Russell, H.J. Sellers, H. Offenburger, D.G. Morrical, S. Barnhart	Leopold Center for Sustainable Agriculture Agroecology Initiative	\$145,913

	through Soil Disturbance by Mob Grazing of Beef Cattle			
2012/15	Use of Grazing Management to Mitigate Greenhouse Gas Emissions while Increasing Soil Organic Matter and Water-holding Capacity of Cool Season Pastures in Southern Iowa	J. Russell, T. Isenhart, W. Powers	Leopold Center for Sustainable Agriculture Agroecology Initiative	\$142,848
2013/16	Processes Controlling the Source, Movement, and Release of Soil Phosphorus in Midwestern Streams from Pasture and Crop Land	R. Schultz, J. Russell, T. Isenhart, M. Thompson, K. Shilling, M. Tomar	USDA-AFRI	\$498,008
2014	Use of Adaptive Grazing Management to Provide Multiple Ecological Services while Increasing Profitability of Beef Cow-calf Production in Iowa	J. Russell	Leopold Center for Sustainable Agriculture	\$39,997

### XIII. SIGNIFICANT PRESENTATIONS (1999-present)

<b>Title</b>	<b>Group addressed</b>	<b>Date</b>
Analyses to Predict Feed Quality	Garst Seed Company Sales Meeting, Slater Iowa	1/20/99
Extending the Winter Grazing Season	Wisconsin Grazing Conference, Madison, WI	2/12/99
Year-round Grazing of Beef Cows	Ohio State University's Jackson Research Farm Field Day	6/7/99
Grazing Legumes	Iowa Lakes Grazing Incomp. Field Day, Sioux Rapids, IA	7/8/99
Forage Availability Affects Supplementation of Beef Cows	Soil-Water-Plant-Animal Management Conference, Lancaster	8/3/99
Integrated Summer and Winter Grazing Systems	Butler County Grazing Workshop, Butler Co., IA	9/2/99
Grazing Crop Residues from bt-Corn Hybrids	Area Livestock Extension Agents In-service Training, Ames, IA	10/20/99

The Development, Evaluation and Demonstration of Management Systems that Increase Uniformity of the Forage Supply for Year-round Grazing by Spring-calving herds	McNay Research and Demonstration Farm Grazing School, Chariton, IA	11/10/99
Using Managed Grazing to Unlock the Potential of Iowa's Grasslands	Agronomy 450 Organic Farm Course, Ames, IA	2/28/00
Composition of the Crop Residues of bt-Corn Hybrids and Their Effects on the Performance of Pregnant Beef Cows	Iowa Feed and Nutrition Seminar, Ames, IA	4/12/00
Composition of the Crop Residues of bt-Corn Hybrids and Their Effects on the Performance of Pregnant Beef Cows	Monsanto Workshop on the Effects on Feeding GMO Crops on Animal Performance, St. Louis, MO	10/5/00
Managing Alfalfa Grazing for Optimal Animal Productivity and Legume Persistence	Iowa Forage Conference, Pella, IA	11/20/00
Year-round Grazing to Optimize the Profitability of Beef Cow-calf Production	Iowa Forage Conference, Pella, IA	11/21/00
Effects of Corn Crop Residue Grazing on Soil Physical Properties and Subsequent Soybean Production in a Corn-Soybean Crop Rotation	Armstrong Research and Demonstration Farm Corn Crop Residue Grazing Field Day, Atlantic, IA	12/14/00
Determining the Nutritive Value of Corn Crop Residues and Their Replacement Value for Hay	Armstrong Research and Demonstration Farm Corn Crop Residue Grazing Field Day, Atlantic, IA	12/14/00
Effects of Corn Crop Residue Grazing on Soil Physical Properties and Subsequent Soybean Production in a Corn-Soybean Crop Rotation	McNay Research and Demonstration Farm Winter Grazing Field Day, Chariton, IA	2/8/01
Utilization of Year-round Grazing to Improve the Profitability of Beef Cow-calf Production	McNay Research and Demonstration Farm Winter Grazing Field Day, Chariton, IA	2/8/01
Overview of Beef Cow-calf Production in Iowa	Swedish Agricultural University, Skara, Sweden	2/14/01
Making Year-round Grazing Work in Iowa	Winter Grazing Field Day, Guthrie Center, IA	2/19/01
Year-round Grazing Systems for Beef Cow-calf Production	Iowa Feed and Nutrition Seminar, Iowa State University, Ames, IA	4/24/01
Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures	Iowa Cattlemen's Association Committee Day	6/22/01

Managed Rotational Grazing Systems	4-H Round-up, Iowa State University, Ames, IA	6/27/01
Beef Heifer Nutrition	Rhodes Research and Demonstration Farm Field Day, Rhodes, IA	7/10/01
Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures	Nebraska Extension and Farm Superintendents Tour, Rhodes Research and Demonstration Farm, Rhodes, IA	8/7/01
Effects of Grazing Management on Sediment and Phosphorus Losses from Pastures	Urbandale High School and Ukranian Visitors Water Quality Tour, Rhodes Research and Demonstration Farm, Rhodes, IA	10/12/01
Water Quality and Grazing Management Progress on the Effects of Grazing Management on Sediment and Phosphorus Loss from Pastures	In-service CEED Training Iowa Cattlemen's Association Annual Meeting, Des Moines, IA	10/24/01 12/6/01
Winter Grazing to Improve Cow Herd Profits (A poster presentation)	American Farm Bureau Federation Meeting, Reno, NV	1/6/02
Animal Scientist's Role in Emerging Environmental Issues	Department of Animal Science Departmental Seminar, Ames, IA	2/15/02
Setting Stocking Rates with Sward Height	4-H Round-up, Ames, IA	6/15/02
Managing Grazing for Water Quality	Rhodes Research and Demonstration Farm, Rhodes, IA	7/9/02
Grazing Corn Stalks and Other Crop Residues During Winter	Missouri Professional Development Training for Extension, Columbia, M)	10/23/02
The Potential of Grazing Management to Control Sediment and Phosphorus Losses in Run Off for Pastures	Iowa Forage Conference, West Des Moines, IA	11/26/02
Crop Residues and Improved Annuals to Extend the Grazing Season	IRM/NC-225/NCBA Integrating Cattle and Forage Resources Conference, Moline, IL	12/3/02
Crop Residues and Improved Annuals to Extend the Grazing Season	IRM/NC-225/NCBA Integrating Cattle and Forage Resources Conference, Moline, IL	12/6/02
Corn Crop Residues and Stockpiled Forage as Options for Extended Grazing Systems	Pasturing for Profit Conference, Maquoketa, IA	1/9/03
Beef Cow-Calf Production in Iowa	Video-streamed presentation to the Swedish University of Agricultural Sciences, Skara, Sweden	1/14/03
Effects of Grazing Management on Non-point Source Pollution of Iowa Streams	Animal Science 490H Honors Seminar, Ames, IA	1/30/03
Nutrient Management of Pastures – Phosphorus	Wisconsin Grazing Conference, Stevens Points, WI	2/18/03
Year-round Grazing Systems	Seniors in Beef Cattle Medicine, ISU Veterinary College	3/25/03
Grazing Management Effects on Sediment and Phosphorus Pollution of Pasture	Water Quality Field Day, Dave Sweeney Farm, Buckeye, IA	8/18/03

## Streams

Beef Cattle Grazing Research	Research Committee of the National Cattlemen's Beef Association, Iowa Cattlemen's Beef Association Headquarters, Ames, IA	10/1/03
Grazing Systems to Improve the Profitability of Beef Cow Herds	Iowa Organic Conference, Ames, IA	11/17/03
Beef Cattle Grazing Research	Iowa Cattlemen's Beef Association, Ames, IA	12/2/03
Winter grazing of stockpiled forages for developing heifers	Story County Cattlemens/Nebraska Cattlemens' Field Day, ISU Beef Nutrition Research Farm, Ames, IA	1/31/04
Management of stockpiled forage for winter grazing systems	Winter Grazing Field Day, ISU Beef Nutrition Research Farm, Ames, IA	2/25/04
The potential of stockpiled grass-legume forages to reduce winter feed costs for Iowa cow-calf producers	New Century Cow-Calf Seminar, Newton, IA	2/27/04
Developing stream crossings	Grazing Alliance Field Day, Rhodes Research Farm, Rhodes, IA	8/3/04
Developing stream crossings	Grazing and Streams Field Day, Rhodes Research Farm, Rhodes, IA	8/3/04
Big bale storage and feeding losses	Hay Management and Fly Control Mini-symposium, Manhattan, KS	11/2/04
Year-round grazing systems for fall- and spring-calving cows	Missouri Livestock Symposium, Kirksville, MO	12/4/04
Crop residues and stockpiled forages for winter grazing systems	Missouri Livestock Symposium, Kirksville, MO	12/4/04
Beef Cow-Calf Production in Iowa	WEB-streamed presentation to the Swedish University of Agricultural Sciences, Skara, Sweden	1/12/05
Stockpiling Forage for Winter Grazing Systems	Winter Grazing Field Day, ISU Beef Nutrition Farm, Ames, IA	2/23/05
Managing Beef Cow Grazing to Reduce Costs and Maintain the Environment	Cow-calf Conference, Pella, IA	2/26/05
Building and Maintaining GeoWeb Stream Crossings	Stream Bank Grazing Field Day, Rhodes Research Farm, Rhodes, IA	9/15/05
Economical Ways of Wintering Beef Cows	University of Illinois Dudley Smith Field Day, Taylorsville, IL	10/26/05
Sampling Methodologies for GPS Tracking of Beef Cattle	ISU 2005 GIS Day, Iowa State University, Ames	11/16/05
Using GPS to Evaluate the Behavior of Grazing Beef Cattle	ISU 2005 GIS Day, Iowa State University, Ames	11/16/05
Extending the Grazing Season to Improve Profitability of Cow-Calf Operations	2006 Kansas Graziers Association Meeting, Assaria, KS	1/21/06
Managing Risk to Improve Profitability of Grazing Systems in the Midwest	2006 Kansas Graziers Association Meeting, Assaria, KS	1/21/06
Integrated Beef and Crop Production in a Biofuel Era: A case for Interdisciplinary	Enterprise Integration for Sustainable Beef Production Symposium at 2006	7/13/06

Approaches.	ADSA/ASAS Joint Annual Meeting, Minneapolis, MN.	
Economical Management to Minimize Large Bale Hay Losses	50 <sup>th</sup> Anniversary Field Day, McNay Memorial Research Farm, Chariton, IA	9/14/06
Grazing Management of Beef Cows to Limit Non-point Source Pollution of Pasture Streams	Veterinary Field Day, McNay Research Farm, Chariton, IA	5/16/07
Effects of Grazing Management on Cattle Distribution in Riparian Pastures	Rhodes Research Farm Field Day, Rhodes, IA	6/28/07
Grazing Research Update	Land O'Lakes Sales Meeting	8/15/07
Grazing Management of Beef Cows to Limit Non-point Source Pollution of Midwestern Pasture Streams	McNay Research Farm Field Day, Chariton, IA	8/28/07
Crop Residues and Stockpiled Forages to Reduce Winter Feed Costs for Beef Cows	McNay Research Farm Field Day, Chariton, IA	8/28/07
Pasture Management Effects on Non-Point Source Pollution in the Rathbun Watershed (A Poster Presentation)	Rathbun Land & Water Alliance Annual Meeting, Chariton, IA	9/13/07
Grazing Management of Beef Cows to Limit Non-point Source Pollution of Midwestern Pasture Streams	Iowa Forage Conference, Des Moines, IA	11/20/07
Grazing Management of Beef Cows to Limit Non-point Source Pollution of Midwestern Pasture Streams	Cornbelt Cow-Calf Conference, Ottumwa, IA	2/23/08
Grazing Management Effects on Bank Erosion and Water Quality of Pasture Streams	Iowa State University Faculty Conference	3/28/08
Grazing Management Effects on Bank Erosion and Water Quality of Pasture Streams	Iowa Farm Bureau Water Quality Conference, West Des Moines, IA	6/25/08
Grazing Management of Cows to Limit Non-point Source Pollution of Streams in Midwestern Pastures	Research Update for Land O'Lakes Sales Staff	8/15/08
Grazing Management of Cows to Limit Non-point Source Pollution of Streams in Midwestern Pastures	Riparian Grazing Workshop for USDA- NRCS, Soil Conservation District, and Extension Staff, Chariton, IA	8/19 – 8/20/08
Grazing Management of Cows to Limit Non-point Source Pollution of Streams in Midwestern Pastures	McNay Research Farm Field Day, Chariton, IA	9/08/08
Grazing Management of Cows to Limit Non-point Source Pollution of Streams in Midwestern Pastures	Rhodes Research Farm Field Day, Rhodes, IA	6/18/09
Grazing Management of Cows to Limit Non-point Source Pollution of Streams in Midwestern Pastures	Optimizing Grazing and Enhancing the Environment Conference, Honey Creek Resort, Promise City, IA	8/25/09
Grazing Management to Limit Non-point	Grazing Management for Water Quality	10/16/09

Source Pollution in Pastures	Protection Webcast, Livestock and Poultry Environmental Learning Center	
Extending the Grazing Season to Improve Profitability of Cow-calf Operations	Leopold Center Grass-based Working Group	12/18/09
Managing Phosphorus Supplementation to Enhance the Economic and Environmental Sustainability of Beef Cow-calf Operations	Economic and Environmental Sustainability of Cow-calf Operations at the 2010 Meeting of the Midwestern Section of the American Dairy Science Association and American Society of Animal Science, Des Moines, IA	3/16/10
Effects of Grazing Management to Limit Non-point Source Pollution of Streams in Midwestern Pastures	Northwest Iowa Pasture Walk, Cushing, IA	6/21/10
Pasture Management Strategies to Minimize the Impacts of Grazing on Water Quality of Surface Water Resources	Environmental Impact of Forage-Based Livestock Production Systems Symposium at the ADSA-PSA-AMPA-CSAS-WSASAS-ASAS Joint Annual Meeting, Denver, CO	7/13/10
Management Strategies to Minimize Nonpoint Source Pollution of Pasture Streams in the Midwest	Northeast Pasture Consortium, State College, PA	2/2/11
Pasture Management Effects on Water Quality of Pasture Streams	Certified Crop Consultant Training, Moravia, IA	8/25/11
ISU Forage Research Review	ISU Beef Field Day, Ames, IA	11/18/11
Feeding CaO-treated stover as a partial replacement for corn in feedlot diets	Argentinian Producer Tour, Ames, IA	8/24/11
Grazing Management	Grazing and Wildlife Workshop, Ames, IA	1/28/11
Prediction of net energy from chemical composition of forages	Area Livestock Extension Specialist In-service Training, Des Moines, IA	3/16/11
Potential for Chemically-treated Corn Stover in Feedlot Diets	Iowa Feed and Nutrition Seminar, Ames, IA	4/5/11
Pasture Management Effects on Water Quality of Pasture Streams	Water Quality Field Day, Hickory Grove Park, Colo, IA	9/8/11
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	Maryland Cattle Industry Convention	3/2/12
Extending the Grazing Season to Improve the Profitability of Cow-calf Operations	Maryland Cattle Industry Convention	3/3/12
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	Iowa Water Conference	3/6/12
Grazing Alternatives and Strategies to Maximize Stocking Densities	Land O' Lakes Beef Feed Sales Training	6/13/12
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	McNay Research Farm Field Day	9/5/12
Strategic Use of Mob-grazing to Improve	McNay Research Farm Field Day	9/5/12

Botanical Composition and Wildlife Habitat in Pastures in South Central Iowa		
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	Mid-Atlantic Crop Management School	11/14/12
Managing Phosphorus Supplementation to Enhance the Economic and Environmental Sustainability of Beef Cow-calf Operations	Mid-Atlantic Crop Management School	11/15/12
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	Iowa Forage Conference	11/20/12
Potential of Mob Grazing for Pasture Management	Southern SARE Forage Webinar	12/7/12
Grazing Management Effects on Non-point Source Pollution of Pasture Streams	Iowa Grazing Conference	6/24/13
Use of Mob-grazing for Wildlife Habitat	CRP Grazing Pasture Walk	9/6/13
Future of Iowa's Grasslands	Animal Science Think Tack	9/30/13
Future of Iowa's Grasslands	Iowa State University Beef Nutrition Showcase	10//2/13
Mob Grazing as a Tool for Grassland Management	Missouri Forage and Grassland Council/Grazing Lands Conservation Initiative	11/5/13
Mob Grazing as a Tool for Grassland Management	University of Missouri Extension In- Service Training	2/12/14

**XIV. REVIEW AND EDITING (1990-present):**

Manuscripts: 86

Theses: 61

Book chapters: 1

Books: 3

External Research Projects: 35

In-State Research/Outreach/Teaching/ Projects (2002-present): 168

5 Faculty credentials for promotion 7  
at external institution

Editor: Editorial Board, Journal of Animal Science, 1994-97; McNay Outlying Research Farm Annual Report, 1990-99; Environmental Section of the ISU Animal Industry Report, 2008-